

SCRAPBOOK<sup>1</sup>  
of  
THAIS LATHEM'S

T H E   E L E C T R I C   E A R

a multimedia concert series

at the

E L E C T R I C   C I R C U S

and her

I N T E R M E D I A   C O N C E R T S

at

A U T O M A T I O N   H O U S E

(1968 - 1971)

<sup>1</sup>. Compiled by Ted (Edgar) Coons. In April of 1968, he introduced Thais Lathem to Dennis Wright (manager) and Stan Freeman & Jerry Brandt (owners) of the original Electric Circus on St. Marks Place in New York City. This was after that month's and the previous December's multi-media and multi-era concerts, "The Electric Christmas" at Carnegie Hall and "The Electric Easter" at the Circus, in which the Electric Circus and the New York ProMusica Antiqua collaborated (and which he initiated). The introduction was her opening to setting up and directing "The Electric Ear" series at the Electric Circus. Later, she continued the series under the name of "Intermedia Concerts" at Theodore Kheel's Automation House at 49 East 68th Street.

A Kind of Foreword in the Form of:  
NOTES TO MY MOTHER  
ON THE NEW ART OF  
MULTIMEDIA AND ELECTRONIC MUSIC  
and the entreprenuring role being played  
by  
THAIS LATHEM  
(written by Ted Coon in January, 1969)

Mother, I'm sure you'll agree that every art that is truly living expresses the spirit of the age in which it is created. But what you may not have thought about is that, because today's age is characterized by a great emphasis on mechanization and technology, its most living art concerns itself, accordingly, with mechanization and technology. For example, take Hi-Fi: Music and records are now intimately connected with the apparatus that reproduces music -- the amplifiers, the speakers, hi-fidelity tape recording, etc. Small wonder that the composers of today have become as fascinated with the possibilities of amplifiers, speakers, etc. as instruments for making music, as yesterday's composers were in the then-novel but now-conventional instruments of the orchestra. Today's composers have used all these sorts of hi-fi electronic possibilities as the instruments to create their music. In addition, they have learned to employ another fantastically important piece of apparatus of our day -- the computer. They have asked the computer to electronically generate sounds that no conventional musical instrument has ever had the capabilities of making, and at speeds which are characteristic of our modern age. Along with the modern techniques of making sound, the new-age composers are taking, as the sounds to work with, the sounds one hears in the everyday world: the rush, clang, and screech of trains, cars, elevators, sirens, subways, jets, etc. These are the source materials for the new compositions, the true sounds of the time. And so we have in electronic music the art of our time and, when we combine light shows, jazz, and music from all ages of our culture, we have multimedia which is an expression of this culture's self-consciousness about its past, and all the styles of its past from gregorian chant to the charleston. This is our new opera.

It used to be said that our culture was really two cultures: the culture of the artist who did not understand science and the culture of the scientist who, if he understood art (and he usually did), did not succeed in making his own world believable to the artist. Now, with electronic music, all of that has changed. The electronic composer, the light artist, etc., are frequently scientists who have turned to being artists and, in doing so, have closed, at last, the schizophrenic gap between the two cultures.

It is important about the new art that it is not most effectively performed in the concert hall -- it seems somehow stilted and inappropriate there because the big concert hall is now essentially a museum for the symphonies of the past. Today's music is best performed in a new kind of hall "Where it's at!" -- a discotheque such as the Electric Circus. Today's art is more nearly total theatre where all the senses are involved, and from every-which direction. The discotheque in which one can move about as one pleases and sample this total theatre as the spirit moves you is the ideal place.

(continued)

(continuation of Ted Coons' January, 1969, "NOTES TO MY MOTHER" - p.2)

Thais Lathem and I sensed all this to be true and did something about it. Thais is a lady whom I met originally at the Yale Music School in 1954 but only re-met last year (1968) shortly before the Electric Easter follow-up (at the Electric Circus) of the Electric Christmas (Carnegie Hall) concert the preceding December. In the meantime, she had been active in politics in Pittsburgh, campaigning for Chester Bowles for President in 1960. Then she moved to England where she was cultural attache at the American Embassy in London. There, she brought many famous American composers and musicians to England's attention. Because of her fine work, she was just this year awarded the Balmont Prize (\$5000) for having done the most for British-American Cultural Relations in the last 3 years. Last year, she moved back to the USA and New York City with her 4 children, now ages 7-14, and became one of three producers of an avant-guard series of electronic music concerts at Hunter College called New Images of Sound. It was highly regarded.

This past April after the Electric Easter, I introduced her formally to the Electric Circus which she immediately saw as the place to shift her series on electronic music. Indeed, beginning this summer, the series commenced at the Circus but under a new and very catchy name -- The Electric Ear. Each Monday night a different electronic and multimedia composer is featured. There have been light shows with each concert and the New York Times has raved, calling it the new music of our age. They say that The Electric Ear series is the most important development in serious music in the nineteen-sixties.

This last December 16th, The Electric Ear did a concert for the annual convention of the College and University Concert Managers of America. This was an extremely important concert since it showed to all the people who book concerts at colleges throughout the country just how important and vital electronic music and multimedia is. I helped to find the money to support that concert through my friend, E. E. ("Kriek") Kriekhaus. Some of the important composers featured were John Cage, Lajaren Hiller, Salvatore Martirano, and Pauline Oliveros (a fellow Texan).

Mother, as you can well imagine, more developments are sure to emerge from all of this. It will be extremely interesting to see what they will be. But whatever happens, it is a compositional role being played by Thais (and to some extent by me) in her putting together and entrepreneuring this multi-media and multi-era synthesis. But it is a compositional role at the very highest level: She is, quite literally and truly, composing with the culture!

Love,  
Ted

P.S. Thais Lathem is a friend of Hubert Humphrey and introduced me to him this past summer during one of his campaign stops here in New York City.

The Electric Circus Foundation presents

# THE ELECTRIC EAR<sup>CI</sup>

*Electronic Music & Mixed-Media at The Electric Circus*

**Monday, May 27: REUNION featuring JOHN CAGE.**

REUNION is an electronic sight-and-sound work whose form is determined by the moves of a chess game. With Gordon Mumma, David Tudor, David Behrman & Lowell Cross. Visuals by Stan Vanderbeek and Beverly Emmons.

## JULY SCHEDULE

**July 1st:**

Mel Powell-IMMOBILES, I, II, III, IV, tape with live sound mobiles.

**July 8th:**

Pauline Oliveros-Music Theater of the Absurd.

**July 15th:**

Michael Sahl-A MITZVAH FOR THE DEAD, with Paul Zukofsky, violin.

**July 22nd:**

David Behrman-QUESTIONS FROM THE FLOOR.

**July 29th:**

Salvatore Martirano-LINCOLN'S GETTYSBURG ADDRESS, multi-projector film with tape and narrator with gas mask.

Other well-known avant-garde figures in THE ELECTRIC EAR series are: Luciano Berio and Cathy Berbarian, Lejaren Hiller, Alvin Lucier, Terry Riley, Michael Sahl, Eric Salzman, and Mort Subotnik.

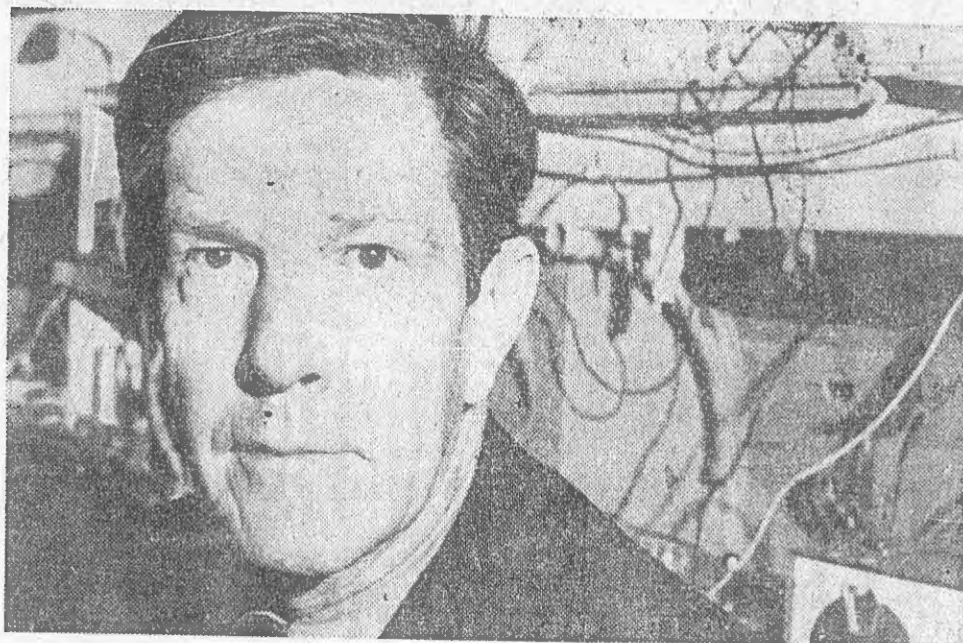
Concerts begin 8:30 PM or

# THE ELECTRIC CIRCUS\*

23 Saint Marks Place, East Village, Tel. 777-4466

\*TM • © 1967 Electric Circus of New York, Inc. Pot. Pend., Collee in the Thint. Jauk \*

## *Makes Music and Where*



Alix Jeffry

**JOHN CAGE**—His "Reunion," an electronic sight-and-sound-system work whose form is determined by the moves of a chess game, will have its premiere tomorrow at the Electric Circus. Mr. Cage's appearance will inaugurate a series of Monday night events devoted to electronic and new music and mixed media programs.



# Music: Libel on the Bishops and Pawns

## Composer's Own Sounds Changed to Chess

By HAROLD C. SCHONBERG

IF it was not the best music of the century, neither was it the best chess game of the century. Last night at the Electric Circus, John Cage squared off against his friend John Kobler, a staff writer for The Saturday Evening Post. They played on an electrified chessboard, and the idea was that their moves would determine the tonal combinations that would be passed through the electronic filters.

So at 8:30 the battle began, Mr. Cage playing White. After four moves a Giuoco Piano opening was under way. After six moves, both players started to fish. After the 10th move, Black had a fine king's side attack working. After the 15th move, he lost track of it and started to fiddle. After the 20th move, White was in trouble. Then Black again lost the continuity of the attack. When this despairing chess buff left, after White's 31st move, Black was pondering the position and apparently worried about it. But wouldn't 31. . . BxP have busted White wide open? Like a fishcake, as they say at the Manhattan Chess Club.

As for the music, there were those old veterans David Tudor and Gordon Mumma and some others supplying the expected whurblings and crinklins. Considering that Mr. Cage is a very slow player, the contribution of the electronic chessboard would have made for the slowest combinations of sounds since Homer's last full reading of the "Iliad."

In any cases, the electronic chessboard was more advertising than anything else. When the players were pondering, with the seriousness if not the depth of an Alekhine-Lasker meeting, there

obviously was no musical combination to offer. When either made a move, there was no obvious change in the sounds that already were coming through the speakers. It was all deadpan Cage nonsense, promising more than ever began to happen, but absurdity carried to the height of fine art. Dada, poor Dada.

Anyway, a sizable crowd watched intently, as though the world's championship was at stake. Later many got bored and drifted over to some character at the rear of the Electric Circus who was doing things with flames. Throughout all this, the electronic music kept on going, very loud, and at one point Mr.

## John Cage Work Heard at Electric Circus

Cage covered his ears. It was dark, it was hot, and to tell the truth it was lousy chess and lousy music.

The quality of the chess one might have expected, for neither player pretends to be an expert. It was all good, clean fun, each player outstumbling the other. But the music, repetitive and unimaginative, routine in technique and uninteresting in execution, was a noisy and irritating bore. Electronic music, which can be the most exciting of all the avant-garde contributions, is ill served with stuff like this.

## Music

The Avant-Groove:  
We're All in It

By DONAL HENAHAN

INcreasing numbers and with increasing success, modern composers are discovering how to make the artistic quantum leap of our time: from the academic avant-garde to what may be called, for want of a more precise term, the avant-groove. That is, they are abandoning the relatively recent European tradition of the artist as anti-popular prophet for the more ancient conception of the artist as a man deeply involved in contemporary society. It may not work out to much, of course, but in view of the dead end at which our opera houses and concert halls seem to be arriving, the leap is certainly well worth trying.

It is not unthinkable that the reason the avant-garde seems to be so hard to locate these days is simply that we are all in it, looking out. The really new and fresh in music right now seems to be happening under our noses: in films, on records, in theaters, even in dance halls—at any rate, outside the traditional symphonic and operatic walls, behind which the embalming of art works goes on endlessly for audiences seemingly impervious to boredom, let alone more interesting reactions.

An example close at hand is the series called "The Electric Ear," at the Electric Circus in the East Village. Last week, in what by any other name is still a teenagers' dance hall, Mel Powell presented a program of his electronic and live music. Powell is chairman of the school of music at Yale University. Tomorrow evening, Pauline Oliveros, who teaches at the University of California in San Diego, brings her electronic "Music Theater of Absurd" to the Circus. On subsequent Monday nights, there will be music of Michael Sahl, David Behrman, and Salvatore Martirano offering his "Lincoln's Gettysburg Address," a multi-projector film with tape and narrator wearing gas mask.

The situation that has prodded such academically trained composers out of the traditional way of looking at music and its uses was bought into sharp focus not long ago, when George Crumb won the 1967 Pulitzer Prize in music for his multi-media work, "Echoes of Time and the River." Commissioned by the University of Chicago, the Crumb piece has been played exactly twice (under great protest from some orchestra men), by the Chicago Symphony. Although it struck this listener as one of the most imaginative works to emerge from the media-mixing revolution, it has little chance of being performed often again.

Crumb, who teaches composition at the University of Pennsylvania, requires of orchestra members that they not only play their instruments in outlandish ways (a percussionist lowers a gong into a bucket of water, for instance, to bend the pitch slightly), but to chant meaningless phrases in unison, to whistle in chords, and to march about in ritualistic processions. All this, of course, veers far off the symphonic music path, and merges with pure theater. Few orchestras will be willing to put such fare before their old subscribers when a Brahms-Beethoven

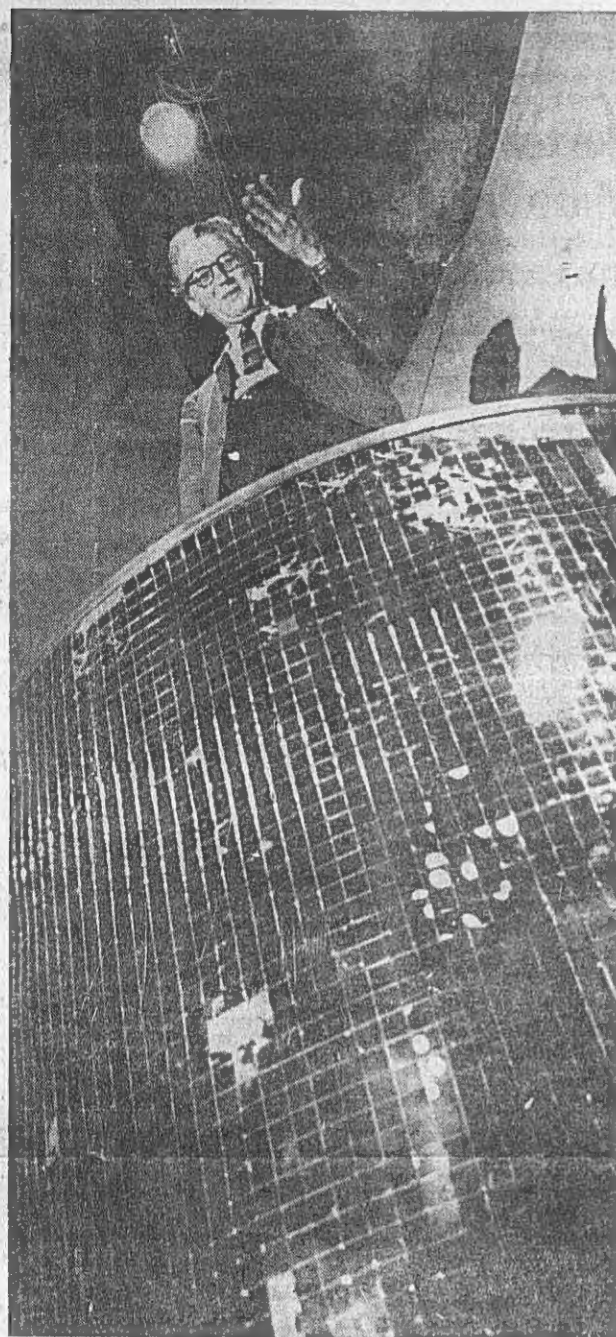
program can be rehearsed and presented with one-tenth the effort and cost, and 10 times the chance of acceptance. In fact, Crumb's only real audience, like that of so many other restless academics these days, waits outside halls where music is treated like a Ming vase, to be put under a glass bell and admired once or twice a week in reverential surroundings.

Crude and Dada-ish as they sometimes may strike us, the struggles of some thoughtful artists to reconnect with society (call it the audience, or the masses, or whatever epithet suits your purpose) deserve the fullest respect and sympathy. Much of what will happen in the arts in the next few years will seem ludicrous on the face of it. Already there has been a rock "Othello" produced in Los Angeles, under the title of "Catch My Soul." That eminent rocker and Shakespearean Jerry Lee Lewis, who until he married his 13-year-old cousin a few years ago was one of the giants of his pop culture, was cast as Iago. Next season, Bernstein's last as musical director, the New York Philharmonic will present a new work by Luciano Berio with the Swingle Singers as the vocal ensemble. And why not?

Popular music has been growing more complex and sophisticated and, as it does so, more Beethoven and Mozart listeners find something in it to respect and like. Ned Rorem takes to print regularly to eulogize The Beatles. The Museum of Modern Art steps beyond jazz to embrace The Soft Machine and Earth Opera, two of the more musically sophisticated rock groups. Pop lyrics grow more sensitive, more poetic—some would say more pretentious, perhaps, but certainly more alive to human realities than at any time in the recent past.

It is still too easy to hold aloof from all these fermenting changes in music simply on the grounds of esthetic excellence. No mixed-media work to appear so far has threatened the graveyard scene of "Don Giovanni" in its masterly mixture of music and magic, tragedy and farce. So extravagantly admired a popular song cycle as Simon and Garfunkel's "Bookends" pales embarrassingly when set beside Schubert's "Winterreise." Of course. Who denies it? But that is hardly the point. In their own ways, the better popular and serious composers today are addressing themselves once more to life as it is actually lived, and if up till now one must admit that there has been a coarsening of sensibility, there has been a heightening of reality to compensate. The truths that Dylan rasps, that is, are for the moment more valuable for us than the truths that a less convulsed society found in Brahms. And it may not even mean much that, in the long run, Brahms will endure while Dylan is forgotten. The truth-teller, in whatever guise, serves his own time well; listen, next time you have a chance, to the words of Dylan's "The Times They Are A-Changin'," and admit what a clear prophecy they were of the last five years in America.

For the concept of the artist as prophet is still worth salvaging out of the wreckage of the old esthetic. In



Composer Mel Powell, whose "Immobiles" was the second in a weekly series of Monday night events devoted to new forms in music, sound and media at Electric Circus.

The new and fresh in music seems to be happening under our noses

that sense there still is an avant-garde, and always will be one. The symphony orchestra, or something very like it, may even continue to help the prophet address his followers. In 1964, Bernstein and the Philharmonic gathered their energies and courage together and let their audience hear a work called "Atmospheres," by the Hungarian avant-gardist György Ligeti. Audiences did not demand that it be repeated in subsequent seasons, though the orchestra did record the work for Columbia. Another instance of an impractically difficult score, one might have said, that was doomed to be rejected after one using, like Kleenex.

But, no. "Atmospheres," which was written in 1961, has turned out to be one of the prophetic works of this decade. Unless you are especially aware of such matters, you may not have noticed that it, along with Ligeti's

"Requiem" and "Lux Eterna," was used in the score of Stanley Kubrick's movie "2001: A Space Odyssey."

"Atmospheres" is heard throughout the final, mesmerizing light show, when the voyaging astronaut, betrayed by the computer HAL, literally blows his mind as he rushes into infinity. The validity of environmental art has never been made clearer than in the scenes using Ligeti's music: the film could not have made its impact without music clairvoyantly attuned to its unfolding moods. In spite of the film's grave flaws, this inspired mixture of media scared its images into one's memory. The success of the merger is all the more remarkable when one realizes that Ligeti's music antedated the film. All the works had been recorded by various German orchestras on the Deutsche Grammophon label.

Of course, the clichés (or gathering tradition, if you

like) of intermedia may soon weaken in their hold on our imagination. Already, the inevitable strobe light has lost some of its power to transfix the eye, and the purposely induced distortion of the rock band, amusing at first, comes quickly to be overlooked. The juxtaposing of logically unconnected sights and sounds, the use of chance, the frenzied attempt to involve the audience in performance—all could well become passé at the next revolution of the wheel. The avant-groove may turn out to be just another old rut.

But, in the meantime, composers are enjoying their dip in the contemporary mainstream. Weaned on an art that has been possibly too concerned with discovering the uses of the past, a healthy number of them now are investigating the uses of the present. If they find none, music really will not be any worse off than it is now.

## Music and Theater Share Same Circuit At Electric Circus

By THEODORE STRONGIN

In a most beguiling way, Pauline Oliveros rode the fine line between music and theater in her "Electronic Music Theater of the Absurd," given in the Electric Ear series at the Electric Circus last night.

Miss Oliveros, a West Coast electronic composer, is a sensitive young woman whose awareness wanders freely into all sorts of corners no one else would notice. She gave the audience a preview of the whimsical, reflective quality of her mind in her first piece, "Some Sound Observations, With Amplified Manhattan."

While live sounds collected outside on St. Marks Place were amplified and projected into the theater, Miss Oliveros, sitting on a dais in the center of the cavelike Circus, read a series of ruminations that she had written for a magazine article.

They mostly concerned Miss Oliveros's feelings about sound in general. She would like to hear the sound a spider makes spinning a web, and she wondered aloud what microbes hear. Her associations were penetrating, gentle, witty and full of sensory awareness.

She also offered the premiere of a work commissioned by the violist, Jacob Glick, who, dressed in white tie and tails, was on hand to play it. Or, rather, to act it out.

Miss Oliveros breached the boundary between musician and magician. After drawing a pentagram on the floor (the traditional symbol of magic), Mr. Glick showed his adeptness with card tricks, disappearing coins and cigarettes. He also played the viola d'amore a bit. His delivery was as droll and absurd as Miss Oliveros's directions to him.

Elsewhere, in another work, "Beautiful Soop," cultured voices, electronically fractured, read poems of Lewis Carroll over a whippoorwill-like accompaniment (among other sounds), while a nostalgic, childlike light show based on the alphabet and on simple words such as "cat" and "bat" was projected on the walls.

"Sound Observations" and

## Entertainment Events

### Theater

#### OPENING TONIGHT

VICTOR, OR THE CHILDREN TAKE OVER, a play by Roger Vitrac, in Serbo-Croatian, by the Atelia 212 (Belgrade), staged by Mica Popovic, presented by Lincoln Center Festival '68, at the Forum Theater, Lincoln Center, 8.

### Films

#### OPENING TODAY

TRIUMPH OVER VIOLENCE, a Russian-Italian documentary, directed by Mikhail Romm, distributed by Joseph Brenner Associates, at the Globe Theater, Seventh Avenue at 43d Street.

### Concerts

#### TONIGHT

ENGLISH CHAMBER ORCHESTRA, Daniel Barenboim conducting, Philharmonic Hall, 8:30.

INTERNATIONAL BACH SOCIETY, with Rosalyn Tureck and others, Library-Museum, Lincoln Center, 8.

CHAMBER ORCHESTRA CONCERT, Alexander Schneider conducting, Rogers Auditorium, Metropolitan Museum, 8:30.

### Summer Sings

#### TONIGHT

NEW YORK CHORAL SOCIETY, Thomas K. Scherman conducting Schubert's Mass in E flat, Judson Hall, 7:30.

### Dance

#### TONIGHT

AMERICAN BALLET THEATER, "Swan Lake," Metropolitan Opera House, 7:30.

### Cabaret

#### OPENING TONIGHT

THE ROOF, St. Regis-Sheraton, Fifth Avenue at 55th Street. Ed Sims and Audre Deckmann, dancers; Joseph Sudy and his Swinging Singing Strings; Quintero and his Latin Band.

THE VILLAGE VANGUARD, 178 Seventh Avenue South. Sonny Rollins Quartet; McCoy Tyner Trio.

UMBERTO'S, 13 East 53d Street. Franco Paganini, singer-guitarist.

ROSELAND, 239 West 52d Street. Norton and Patricia, the Cathalos, Solange and Charles, dance acts.

"Beautiful Soop" were first New York performances, as was "Big Mother Is Watching You," in which Miss Oliveros deserted whimsy for dense, searing sound. "Night Jar," Mr. Glick's piece, had its world premiere.

### Crash Kills Five Ohioans

WALSENBURG, Colo., July 8 (AP)—Five Ohioans were killed today when their house-car struck a parked semi-trailer truck and burst into flames. The victims were Chester Dapoz, 27 years old, of Sugar-creek; his wife, Carrol, 24; their son, Barry, 4; Mrs. Dapoz's father, Dr. Raymond A. Klinger, 50, of Baltic; and Jennifer Zimmerman, 17, also of Baltic.



# Music: 'Mitzvah for Dead'

## Zukofsky Takes Advanced Composition on Flight to the 19th Century

By HAROLD C. SCHONBERG

THE Electric Circus is a hangout for the really advanced kids, and a lot of avant-garde music is unveiled there. So last night when Paul Zukofsky came out to play Michael Sahl's "Mitzvah for the Dead," with electronic accompaniment, everybody braced himself. Here we go.

And off we went, into the 19th century. Mr. Sahl, who himself may or may not be a violinist, knows the violin literature. He has ransacked the virtuoso and salon literature of the last century, and has come up with a piece that has every cliché, every virtuoso stunt, every excess of expression, that inhabit the collected works of Bruch, Wieniawski, Vieuxtemps, Rode, Paganini, Joachim and other forgotten or near-forgotten figures.

It was indeed a mitzvah for the dead, mitzvah being the Hebrew word for good deed. If anybody missed the point, a potted palm was placed next to the dais from which Mr. Zukofsky played.

The first section was very funny. The violinist would play a series of gypsy-like phrases, say, all complicated and tuneful, and the electronic background would comment on it with a series of inhumanly virtuosic phrases that no mere living violinist could hope to come near. But it was the last movement that was remarkable. I still don't know if it was a come-on, or if it was to be taken seriously, or if it was tongue-in-cheek. It was nothing else than "The Last Rose of Summer," for solo violin without

any kind of accompaniment, and it was in variation form, the kind of cheap variations that can be found by the antiquarians who delve into the music of Herz and Huenten.

The trouble was that it was too close a duplication to be funny. One can imagine violinists of a previous generation saying something like: "Hey, this is a great piece! I will play it!" It actually sounded serious. Now, this can be the higher Camp, too high for us lowbrows. But after a while one did look for some comment of the composer on the old-fashioned stuff he was purposely feeding us. Nothing happened. The piece ended as seriously as it began.

Anyway, it was very unexpected, and great fun. The other two pieces of Mr. Sahl, "Wheel" and "Tropes on the Salve Regine," had less to offer, being conventional electronic doodling, the former purely electronic, the latter with a voice singing the tropes against the taped sounds. In "Wheel," there was an Indian influence, with sitar-like sounds. In neither was there any great imagination.

James Signorelli was responsible for the visual elements of the show, and some of his projections were gorgeous. It might be mentioned that a good part of the audience listened to the "Mitzvah" as though it were Beethoven's Op. 132, though there were some snickers as the brilliant Mr. Zukofsky—what a strong violinist!—made his way through "The Last Rose of Summer."

## ELECTRIC CIRCUS MIXES ITS MEDIA

Rock Group's Leader Really  
an Academic Composer

There is a good deal of talk these days about the interchange going on between popular and serious music, but the merger is taking place nowhere more plainly than at the Electric Circus.

Last night's happening (has anyone devised a suitable name for these odd multimedia affairs?) was given over to sound collages by David Behrman, an electronic composer who has studied with Stockhausen, Rieger and Posseur, and is a violist and pianist. He was assisted by a congenial group of actors, sculptors and local avant-gardists, as might be expected from any event in the series known as "The Electric Ear."

As at past Electric Circus events, there also was rock music, woven into Mr. Behrman's portion of the night, by a shaggy young man named David Rosenboom and his group, called Think Dog! Only one brand-new to the scene would be surprised to learn that Mr. Rosenboom is, in another life, an academically trained composer (University of Illinois) as well as a violist, violinist and pianist.

Mr. Rosenboom and his Think Doggers, in fact, made most of the interesting sounds at this weakly structured event, which centered on a political parody in which Robert Ackerman, an actor, and Jon Hassell plugged into taped press conferences by Presidential aspirants, and repeated more or less literally their inanities, like battery-operated dummies.

Hubert Horatio Humphrey

came in for the hardest licks, but a television collage by Nam June Paik and Jud Yalkut also snipped at Mayor Lindsay, Lyndon B. Johnson and other savants. (The same film, incidentally, was shown interminably at Charlotte Moorman's recent Town Hall recital, where she did not undress to play the cello.)

### Sculpture by Dienes

In the midst of the usual Electric Circus light show, silvery plastic sculptures by Sari Dienes, depicting politicians in action, just stood there and glowed (one had a loudspeaker for a mouth). In an eerily light-

ed foam-padded room off the main convention hall, another Dienes sculpture stood, or rather lay: a white-gowned figure who might well have been Columbia the Gem of the Ocean herself. These events, you see, are something of a multi-dimensional Rorschach test.

Interspersed with politically inspired segments were Mr. Rosenboom's rock compositions, among which one recalls most fondly something that reiterated in doom-shaped tones:

"Music is your only friend . . . until the end."

Depending upon one's orientations, personal tastes and mood, it was the sort of night to be experienced as Götter-

dämmerung, Nirvana, Judgment Day Minus One, the Last Days of Weimar or perhaps merely Chacun a son goût.

DONAL HENAHAN.

### 20 Million in California

LOS ANGELES, July 22 (UPI)

—California, already the most populous state, has broken the 20 million mark, the Los Angeles Area Chamber of Commerce reported today. Nearly half of the residents of the state live in the five-county area that includes Los Angeles County. The other counties are Orange, Kern, Ventura and San Bernardino.

THE NEW YORK TIMES, TUESDAY, JULY 30, 1968

## LINCOLN ADDRESS DISTORTED IN POEM

Electric Ear Offers Antiwar,  
Mixed-Media Assault

By THEODORE STRONGIN

The printed program was wrong, the composer said, because it gave away his secret. What should have been simply, "L's G.A.," on the program was listed as "Lincoln's Gettysburg Address."

But Salvatore Martirano who wrote "L's G.A.," was himself wrong. Nothing printed on the program could possibly give away what a savage, mind-tearing, thundering, antiwar mixed-media documentary poem Mr. Martirano had made out of the famous address.

It was a far cry from a high school elocution demonstration at the Electric Ear series at the Electric Circus, 23 St. Marks Place, last night.

Mr. Martirano's multispeaker, multiprojector version of Lincoln unfolded like a full-fledged battle, threatening every second. The chief live character was a "politico" who recited the address—more or less. It was not given straight. It was distorted and extended to last about 40 minutes.

### Taped Sounds Dominate

Although Mr. Martirano's taped sounds are the leading edge, dance, theater, literary and purely visual elements are mixed together inseparably in "L's G.E." Certainly it is literary irony to pick the Gettysburg Address as the key element in a work about man's destructiveness. Ronald Nameth's multiprojector background film underscores the irony, as when the screen shows insectlike toy tanks and planes being arrayed in formation on a nude female body.

The film does more than this. It is fantastically active, with patterns, abstract and not, cascading past the eye so fast that sometimes all the politico needs do to dance is to stand still as the lights play over him.

### War Sounds Suggested

But the strongest comment comes from Mr. Martirano's pretaped sounds. Everything that can be associated with war, from bombs bursting to infants crying, is suggested, not quite explicitly, on tape, each kind of sound with an episode to itself. And in distorting the address—beautifully done by M. C. Holloway, reciting through a gas mask—Mr. Martirano has made everything out of it, from hysterical demagoguery to political twaddle.

Aside from commentary, Mr. Martirano's ability to make cogent forms out of telling sounds was clear. "L's G.A.," though it uses other elements, is musical in conception. Its events follow musical order and musical timespans.

Mr. Martirano's way with sounds was also heard in other, more strictly musical events on the program, improvised live by his jazz-poetry group, The Border Guard, as well as taped by him.

The program will be repeated tonight at 8:30.

The Electric Circus Foundation presents

# THE ELECTRIC EAR<sup>(C)</sup>

*Electronic Music & Mixed-Media at  
The Electric Circus*

## AUGUST SCHEDULE

**AUGUST 5; WILLIAM RUSSO**

**A MultiMedia Rock Cantata.**

**AUGUST 12: ALVIN LUCIER**

**Shelter 99999. A sight and sound  
study of underground living in the year 9999.**

**AUGUST 19: LEJAREN HILLER**

**Machine Music, and other works for computer,  
tapes, instruments, and dancers.**

**AUGUST 26: MORTON SUBOTNICK**

**Play-Four, A MultiMedia Game Piece  
with Tony Martin.**

**Single admission \$4.50**

**Students \$3.50**

**Concerts begin at 8:30 PM**

**and include rock-music, dancing, circus  
acts, refreshments, lights**

# THE ELECTRIC CIRCUS\*

23 Saint Marks Place, East Village, Tel. 777-4466

\*TM & © 1977 by The Electric Circus, New York, Inc. Post Paid

## Noisy Crew Brings 100th-Century Life To Electric Circus

By THEODORE STRONGIN

Passersby on St. Marks Place between Second and Third Avenues last night were treated at least in part to "a study of underground living in the 100th Century." Most of them didn't bat an eye, in true New York tradition.

The "study of, etc." is the subtitle of a work called "Shelter 9999" by Alvin Lucier and Takahiko Iimura which started indoors in the Electric Circus, the discothèque at St. Marks Place, which on Monday nights this summer has been the scene of a multimedia series of events called "The Electric Ear."

At its beginning, "9999" was inspired by bats, according to Mr. Lucier, who provided its music. With the tentlike interior of the Electric Circus dimly lit, four characters in dark glasses clicked quietly at each other, moving. Mr. Lucier had explained before the event started, only when the echo of their clicks came back to them in certain ways. "Sonar," he called it. This part of "9999" lasted about 20 minutes and was very quiet.

Then, abruptly, a scratching, tearing, shrieking multi-channel tape was turned at top volume, while films and slides made by Mr. Iimura covered three sides of the hall and part of the ceiling. The slides were mostly excerpts from newspapers—a bridal picture, an obituary notice. The films were fast-moving squiggles. This phase lasted about 45 minutes, and for the last 15 minutes or so of it, brilliant white lights kept flashing off and on.

Then, Mr. Lucier and four colleagues, blowing on conch shells, gradually eased out of the hall and down to St. Marks Place, hooting at each other hauntingly. Mr. Lucier was last seen starting up Second Avenue, a half block from the hall, as the others went off in different directions, still hooting. It's an old African tribal custom, Mr. Lucier said.



# THE ELECTRIC EAR

Electronic Music & Mixed-Media at The Electric Circus

AUGUST 19

Music by

LEJAREN HILLER

Machine Music for Piano, Percussion and Tape (1964)

Neely Bruce, piano  
G. Allen O'Conner, percussion  
George Talbot, projections

Nightmare Sequence from "Time of the Heathen" (1961)

Excerpt from full-length film written  
by Peter Kass and filmed by Ed Emschwiler.

Computer Music for Percussion and Tape (1963)

I. Angular  
II. Brisk  
III. Lyric

G. Allen O'Conner, percussion

INTERMISSION

Suite from "Blue is the Antecedent of It" (1959)

Text and scenario by Jack Luckel  
Production designed by Powell Shepherd  
Lighting by George Talbot  
Costumes by Powell Shepherd & Judith B. Foreman  
Dancers: Powell Shepherd, Laurel Simerl, Judy Jarvis,  
Moira Logan, Fred Behringer, Ron Bunker, John Rolland

Vignettes Vinaigrettes (1955, 1956, 1948, 1950)

Neely Bruce, piano  
George Talbot, projections  
Costumes by Powell Shepherd & Laurel Simerl  
Staged by Powell Shepherd  
Actors: Ann Aldrich, Fred Behringer, Susan Falk  
Dancers: Powell Shepherd, Laurel Simerl

INTERMISSION

Electronic Suite from "A Triptych for Hieronymus" (1966)

I. The Garden of Eden  
II. The Garden of Earthly Delights  
III. Hell

Production designed by George Talbot  
Staged by Powell Shepherd  
Costumes by George Talbot & Laurel Simerl  
Cast: Powell Shepherd-"Adam"; Laurel Simerl-"Eve";  
Ann Aldrich-"Pop Singer"; with Fred Behringer, Ron  
Bunker, Susan Falk, Moira Logan, Judy Jarvis, John  
Rolland, Robert Sardo.

# THE ELECTRIC CIRCUS\*

23 Saint Marks Place East Village Tel. 777 4466

LEJAREN HILLER has been Professor of Music and Director of the Experimental Music Studio at the University of Illinois in Urbana since 1958. Hiller has composed more than 40 scores for orchestra, chamber groups, solo instruments, theater, film and TV. Much of his recent music utilizes tape and other electronic-media, such as his An Avalanche for Pitchman, Prima Donna, Player Piano, Percussionist and Prerecorded Playback, premiered in Urbana in April; Algorithms I for 9 Instruments and Tape, a computer music composition, and HPSCHD for 1 to 7 Harpsichords and 1 to 51 Tapes composed in collaboration with John Cage. Born in New York City in 1924, Hiller studied composition with Milton Babbitt and Roger Sessions at Princeton University while obtaining a PHD in chemistry. He has worked as a research chemist for DuPont and a Assistant Professor of Chemistry at the University of Illinois. In 1957 with Leonard Isaacson, he composed the Illiac Suite for String Quartet, the first composition composed with a digital computer. (This work is available on Heliodor Records HS 25053.) Hiller has been appointed Slee Professor of Composition at the State University of New York at Buffalo starting September 1968.

GEORGE TALBOT was born in 1929 in Chicago. He attended the University of Chicago, where he studied anthropology. His interest in stage design developed at the University of Illinois where he designed sets for the world premier of The Bell Tower by Ernst Kreneck, as well as Esther by Jan Meyerowitz, The Widow by Ken Gaburo, Revelation in a Courthouse Park by Harry Partch, and Man with an Oboe by Webster Smalley. He has also worked as a producer and designer for National Educational Television and has made both documentary and experimental films. He has been working with Lejaren Hiller and Webster Smalley on Triptych for Hieronymus for eight years. Talbot is currently teaching in the Department of Anthropology and the School of Architecture at Washington University, St. Louis, Missouri and is associate editor and art director of TRANS-ACTION Magazine.

POWELL SHEPHERD holds a B. F. A. from the University of Texas (1964) and a M. A in Dance from the University of Illinois (1968). He has also studied at the Mary Wigman Studio, Berlin and at the Palucca Schule, Dresden. In Berlin he organized his own dance group and gave two seasons of performances. During the summer of 1965 he was a dancer at the Bayreuth Wagner Festival. In London, following several solo recitals and demonstrations, Shepherd staged the first dance-drama of the Eucharist with a contemporary Mass. During the past year he has worked closely with composers Hiller, Martirano and Bryars staging and performing several new works in Urbana, Ill. and Chicago.

#### Visual credits for "Garden of Earthly Delights"

Production by George Talbot

Production assistant: Bruce Bryant

Photographic Sequences:

The Creation, Adam and Eve Dance, Graveyard, Climbing,  
Eating, Junk Yard

Robert Pettus

Animal Stampede, Magician's Trick

Scott Dine

Street Market

James Newberry

The Party

Robert Pettus, T. Mike Fletcher, John Millaire, Fred  
Krughoff, Barry Fitzgerald

The Park

Robert Pettus

Shoppers' Hell

Robert Pettus, John Millaire, Fred Krughoff, Barry Fitzgerald

Chrome Plated Hell

John Millaire

# COMPUTER TUNES HEARD AT 'CIRCUS'

Lejaren Hiller Makes Them  
Sound Nonmechanical

If anything of more than ephemeral interest is going to evolve out of the current mixture of live and electronic music, drama and dance, films and flimflammy, then Lejaren Hiller is likely to be one of the people responsible for the evolution. Mr. Hiller, a chemist and composer who has been on the University of Illinois music faculty since 1958, presented an evening of his works last night in the Electric Ear series at the Electric Circus. In few artists currently in the public view do all the cross-currents of the present find such a happy meeting.

Mr. Hiller's fame in musical circles is based on his use of computers in composing. Oddly, however, the works heard (witnessed, experienced, or however you care to say it) at the East Village dance hall were anything but mechanical or rigid in feeling.

His "Computer Music for Percussion and Tape" (1963), performed with virtuosity and deadpan wit by G. Allen O'Connor, seemed to take a swipe at the machine age in a clanking, wheezing movement that evoked that steam-age wonder, the calliope.

"Machine Music for Piano, Percussion and Tape" (1964), in which Mr. O'Connor was joined by Neely Bruce, a pianist, exploited the usual electronic sounds, but leavened them with broad humor. At one point the pianist slowly blew up a blue balloon and popped it, right on cue, for a grand fortissimo.

Mr. Hiller, or his computer, also saw to it that the piece went along in gaily inventive rhythms, and in segments brief enough to militate against monotony. How unsettling it is to hear such interesting music brought to life by a mechanical midwife, while supposedly human composers go on turning out stillborn works.

Unlike most Electric Ear programs, Mr. Hiller's was not much dependent on light shows, and not at all on the resident rock band to keep the pot of audience interest boiling.

Although this reviewer could not stay for the finale, an electronic suite from Mr. Hiller's magnum opus "A Triptych for Hieronymus" (1966), the drift of his thought seemed evident in two other staged pieces, both choreographed and staged by Powell Shepherd, with lighting and décor by George Talbot.

The Suite from "Blue Is the Antecedent of It" (1959), full of fragmented human voices, in-

cluded at one point a prim housewife who came on stage carrying a paper bag, from which she carefully took a rubber baby doll. After tearing it to shreds in an ecstasy of some ill-defined sort, she walked primly off.

"Vignettes Vinaigrettes," a dish of heavy camp that spoofed Le Belle Epoque in the manner of Barber's ballet "Souvenirs," had its funny moments, but needed more choreographic inventiveness and less dependence on vaudeville japes.

DONAL HENAHAN.

# THE ELECTRIC CIRCUS

Electronic Music & Mixed-Media at The Electric Circus

AUGUST 26

THE WILD BULL  
for electronic music synthesizer  
by  
MORTON SUBOTNICK

\*\*\*intermission\*\*\*

THE CLOSER SHE GETS  
a collaborative composition  
by  
ANTHONY MARTIN & MORTON SUBOTNICK

electronic music	Morton Subotnick
electronic light	Anthony Martin
electronic harpsichord	Joel Spiegelman
(score and performing)	
stationary figure	Susan Metheke
moving figure	Elaine Summers
players	Brent Dangerfield
	Bob Masson
	David Rosenboom
	John Schewel

\*\*\*INTERMISSION\*\*\*

( The program will be repeated after the second intermission. )

THE WILD BULL is an electronic composition commissioned by Nonesuch Records and was composed on the Buchla modular electronic music synthesizer specifically for the record medium. The title is taken from a Sumerian poem written in 1700 BC. It is in two parts. The Wild Bull, which is being heard tonight for the first time, will be released in September.

THE CLOSER SHE GETS is a composition in which the performers activate the electronic media: four players performing four speaker amplitudes, one dancer performing electronic music channel selection, one dancer performing harpsichord amplitude and the electronic light channels. The performer activated ingredients, or sources (electronic music, electronic light, electronic harpsichord) are supplied continuously.

MORTON SUBOTNICK was born April 14, 1933, in Los Angeles, California. He earned his undergraduate degree in English Literature from the University of Denver and his MA degree in Composition from Mills College, where he studied with Leon Kirchner and Darius Milhaud. While in California, Subotnick co-founded the Mills College Performing Group and the San Francisco Tape Music Center. At this same time he held posts as Assistant Professor of Music at Mills College and Music Director of Ann Halprin's Dancers' Workshop Company. He was Musical Director of the Repertory Theater at Lincoln Center during its first season. Since the Fall of 1966 he has been involved with the Intermedia Program at the School of Arts at New York University.

## THE ELECTRIC CIRCUS\*

21 Saint Marks Place East Village Tel. 277-4466

ANTHONY MARTIN, environmentalist, painter, and light-artist, was born in Knoxville, Tennessee in 1937. His education includes the University of Michigan and the Art Institute of Chicago. In 1959 Martin first began working with light for a total environment and continued to compose and develop light scoring techniques in San Francisco, Los Angeles, Seattle and Vancouver. He toured several of his early light works in concert with the San Francisco Tape Music Center. His "Theater for Walkers, Talkers, Touchers"--an interaction maze--was shown at the San Francisco Museum of Art in 1961. He created the light show at the Fillmore Auditorium in San Francisco in 1965, and designed the light show for the Electric Circus in New York in 1967. Martin has served as Visual Director of the Tape Music Center at Mills College in 1966-67, and is presently Artist-in-Residence in the New York University School of the Arts Intermedia Program.

JOEL SPIEGELMAN, composer and harpsichordist, is a member of the music faculty of Sarah Lawrence College. He received his Master of Fine Arts degree in composition at Brandeis University in 1956 and then he was a student of Nadia Boulanger for four years on a French government grant. During this time he toured Europe and the Middle East as pianist and harpsichordist. In 1965 he was a participant in the United States-Soviet Cultural Exchange Program and spent five months in Moscow and Leningrad doing research on 18th century Russian harpsichord music. During this stay he was able to acquaint himself with the younger generation of Soviet composers, and returned with some 30 scores of avant garde Soviet music hitherto thought non-existent. Since his return Mr. Spielgelman has presented several programs of new Soviet music.

Electronic harpsichord  
by  
Baldwin Piano & Organ Co.

THE WILD BULL

The wild bull, who has lain down, lives no more,  
the wild bull, who has lain down, lives no more,  
Dumuzi, the wild bull, who has lain down, lives no more,  
the wild bull, who has lain down, lives no more

O you wild bull, how fast you sleep!  
How fast sleep own and lamb!  
O you wild bull, how fast you sleep!  
How fast sleep goat and kid!

I will ask the hills and the valleys,  
I will ask the hills of the Bison:

"Where is the young man, my husband?"

I will say,  
"He whom I no longer serve food"

I will say,  
"He whom I no longer give to drink"

I will say,  
"And my lovely maids"

I will say,  
"And my lovely young men?"

"The Bison has taken thy husband away,  
up into the mountains"

"The Bison has taken thy young man away,  
up into the mountains"

"Bison of the mountains, with the mottled eyes!  
Bison of the mountains, with the crushing teeth!  
Bison!—He sleeps sweetly, he sleeps sweetly,  
He whom I no longer serve food sleeps sweetly,  
He whom I no longer give to drink sleeps sweetly,  
My lovely maids sleep sweetly,  
My lovely young men sleep sweetly!"

"My young man who perished from me  
(at the hands of) your men,  
My young Ababa who perished from me  
(at the hands of) your men,  
Will never more calm me (with) his loving glance  
Will never more unfasten his lovely bright clasp  
(at night)

On his couch you made the jackals lie down,  
In my husband's fold you made the raven dwell,  
His reed pipe—the wind plays it,  
My husband's songs—the north wind sings them."

Sumerian c. 1700 BC, translated by Thorkild Jacobsen from *Most Ancient Mesopotamia*, selected and translated by Thorkild Jacobsen & John A. Wilson  
published by The Oriental Institute of the University of Chicago (U. of Chicago Press)

Reprinted by permission of Professor Jacobsen and The Oriental Institute whose kind cooperation is gratefully acknowledged

The Electric Circus Foundation was formed to sponsor and encourage an understanding of and a public interest in the fields of theater, dance, music, film, and the arts, with emphasis on the new multi-media technological advances. Its function is to stimulate and present works in these fields through commissions for new and original pieces and to award grants to existing organizations and individuals active in these fields. Also, it will provide the Electric Circus facilities for the presentation of some of these works. The Electric Ear is the first project of the Foundation.



THE NEW YORK TIMES, SUNDAY, SEPTEMBER 15, 1968

# Too Soon To Demand a 'War and Peace'

By DONAL HENAHAN

**S**HORT of signing up in the Nostalgia Book Club ("lets you take a vacation from the Sick Sixties") and avoiding any thought about the world as it is, it would be hard to adopt a consistent attitude toward serious music today. Even simple logic can be a burden when dealing with an anti-logician such as John Cage or Nam June Paik, for instance, and open-minded receptivity seems the only sane stance. When influential music goes on being composed in defiance of the push-pull of esthetic theories, it is hardly helpful to adopt a righteously partisan attitude for, say, Cage's Zen-ish ambiguities and playfulness while abhorring the formal purity of Roger Sessions's symphonies. Both are serious in the deepest sense, which is enough to win them tolerance.

Nevertheless, having thus fortified his center, the observer of new music in the late sixties can scarcely avoid being particularly stimulated by the work of those composers who are turning away from established forms and swimming recklessly into mysterious waters—electronics, the new theater, dance-drama, minimal opera, and so on. For many of these composers, the abstract play of notes, refined, to musical mandarinism by the defenders of a dying symphonic tradition, no longer seems to fulfill what they regard as music's full potential. Music, they seem to be saying to us, is more than a rarefied game of chess, more than a bead game with rigid, internally binding rules and purely intellectual joys.

Well, then, what is music, or what might it be, if not simply a social habit or an intellectual discipline?

The composers who presented their experimental works at the Electric Circus on Saint Mark's Place during this summer's Electric Ear series—a series one devoutly hopes will not be allowed to die—gave us some possible answers to think about. It might be fun, for one thing. About half the time, they bored, infuriated or depressed us, too, but if experimental art succeeded in giving pleasure all the time, it would not be necessary to call it experimental, would it? Although their efforts to amuse and edify varied widely in intent, quality, exploitation of the hall's technical resources and sheer ambition, one could feel tremors of sympathetic connection with people such as Lejaren

Hiller, Salvatore Martirano and William Russo, to name three who plainly had ideas that they wished to transmit by one means or another.

Martirano's "outburst against war, Lincoln's Gettysburg Address," was by all accounts more successful than Russo's "Civil War Cantata," but both aimed at an involvement with us and our times that was missing from other Electric Ear programs. Rather more often than one would wish, the series was allowed to wallow self-indulgently in witless camp, in the merely chic and in mindless carryings-on that were all the more dispiriting because they were

sometimes spontaneous, thus exposing putative artists as hardly more inventive, left to themselves, than the rest of us.

David Behrman's slice of Cageiana, "Questions From the Floor," also tried for political comment but came off as diffuse and haphazard. Mel Powell's electronic tapes were obviously not intended specifically to accompany theatrical happenings; and indeed were played later for a concert audience at Tanglewood.

The Powell program also promised a confrontation between his electronic tapes and a rock band, a face-off that fizzled because the tapes overpowered the rockers in volume (perhaps the first time in history that a rock group has been thus humbled). As the series went forward, one could find fewer and fewer attempts to intermix pop with academic music—the latter, in fact, sometimes took over entirely and returned us to pure concert-hall situations, sans only comfortable seats and orange crush at intermission.

What was the useful residue of all this midsummer madness? Not a lot, if you insist on viewing music's only function as the production of reperformable masterpieces. Hardly a work presented could ever be played again in the same way, because of the very free-wheeling spirit behind the whole Electric Ear idea.

Sometimes the spirit of improvisation caused snarls and confusions. At one point in the Powell evening, performers in both street clothes and eccentric costumes snaked into the darkened hall and executed a follow-the-leader routine that looked simply ill-rehearsed. Actually, one learned afterward, the types in street clothes (one looked like a divinity student caught in a disreputable house) had been capoled or shanghaied into service while passing a door in the hallway, and were an extempore part of the show. The point of this rather humorous idea was lost, however, because we in the audience knew nothing about it and could only think of the dancers as inept.

Such are ever the perils of improvisatory and experimental theater, so often more interesting in retrospect than in the experiencing. It was the possibility of such perils, however, that made the Electric Circus, not any of the city's traditional concert houses, the Edge City of New York's music this year. What appealed to those whose minds and ears increasingly find something lacking in traditional concert, opera and recital life was the potentially fertile mixture of theater, dance, rock, jazz, electronics and classical music. There was always the possibility that a conservatory-bred musician would be infected by the vitality that surges through rock culture, without losing his own technical and esthetic moorings; that the crowd's blind of bearded and bearded taens and up-town matrons, of students and uptight

tourists would coalesce into a genuinely involved, demanding community of spirits.

There were indeed times when one felt exactly that happening, and they justified a great many other, feebleness moments. But one problem with mixing media—and it applies with almost crippling force to the grandma of mixed media, grand opera—is the need for drawing together. (Continued on Page 24)

Continued from Page 23

or under one tent five, six or a dozen sizable talents willing to merge into a seamless unit. (The Warhol and Cunningham-Cage coterie have done this more or less successfully.) But in a series such as the Electric Ear, many of the artists and performers come together briefly, play their parts and go their ways, making really cohesive effort improbable. The future of mixed-media experimentation may lie therefore in the universities, where a relatively stable community of composers, musicians, dancers, choreographers, lighting experts, directors and actors usually exists, waiting to be commanded by a major talent.

We witnessed a few such academic collaborations this summer—Miller's University of Illinois group, for instance—and there will be others. Mixed-media art as a workable form is still struggling in the womb. It is too soon to make very severe demands on it, too soon to demand its "War and Peace" when its "Clarissa Harlowe" has yet to be written. At the moment, what some have seen as the potential "Gesamtkunstwerk" of our time is more often a new mask for banality, for lack of training and talent, for wornout ideas masquerading as outrageous novelty. The truth is that cheap sentimentality does not gain much by being expressed electronically, that you cannot revive Romanticism under the guise of pretending to mock it, that you cannot simply paint a Day-Glo border around poor old Dada and expect to pass it off as the latest and grooviest thing.

What the farthest-out composers seem to be working toward these days is an inwardly turned kind of music-drama, a Theater of the Mind, if you will, in which sounds, lights, movement and a few minimal, suggestive props are used to encourage the spectator to play out some essentially unstageable, poetic experience on a stage erected in his head. It will be immediately protested, of course, by those wise men to whom nothing can ever again be new (Wagner did it, you know, and Berlioz, and the Greeks before them) that composers have always exploited other media to help them insinuate moods and dramatic ideas into the listener's head. Talented musicians simply do it more successfully than others.

Granted; but each generation must rediscover its own revolutionary, truths, and something oddly different is being heard in certain experimental works today: not only a willingness to use fantasy, but a desire to surrender to it, to compose "head music" that simulates the drug experience. Music, and perhaps any art, the composers seem to be saying, is an allusive, never a specific, way of addressing the human mind, a magical way of inventing a kind of reality out of the universe's chaos, at least for the duration of the show.

Obviously, all this has its dangers, including at times a bland anti-intellectualism that can be frightening, but undeniable appeal and promise are there, too. The Theater of the Mind might lead to something beyond the pleasure principle, in fact, if its proponents could get past the sed of the pseudo-psychedelic, of trying to fake trips for stay-at-homes. There is no long-range value, that is, in looking for the rainbow at the end of the pot.

# THE ELECTRIC EAR

Electronic Music & Mixed-Media at The Electric Circus

DECEMBER 16, 1968

SPECIAL DEMONSTRATION CONCERT IN HONOR OF  
THE ASSOCIATION OF UNIVERSITY CONCERT MANAGERS

ELECTRONIC SUITE from "A Triptych for Hieronymous" (1966)

- I. The Garden of Eden
- II. The Garden of Earthly Delights
- III. Hell

Music Composed by Lejaren Hiller  
Scenario by Webster Smalley  
Production Conceived and Designed by George Talbot  
Choreographed and Staged by Powell Shepherd

Visual Credits: Robert Pettus, Scott Dine, John Millaire,  
James Newberry, T. Mike Fletcher, Fred Krughoff, Barry  
Fitzgerald; Production Assistant, Bruce Bryant

Cast: Eve, Laurel Simerl; Adam, Powell Shepherd; Pop Singer,  
Susan Falk; with Elisabeth Babiscio, Robert Brown, Jim Carlton,  
Alan Causey, Ken Hill, Gail Mazur, Karol Kaye Stevenson.

\*\*\* Short Intermission\*\*\*

PING (1968) based on the short story by Samuel Beckett  
First New York Performance

Music Composed by Roger Reynolds  
Film by /Roger Reynolds; Cameraman, Kazuro Kato; actor,  
Seikiji Maro; projections, Karen Reynolds.  
Yujji Takahashi, pianist; David Rosenboom, harmonium-  
percussion; Robert Cram, flute; Morton Subotnik, photo-  
cell sound distributor; Jon Hassell, ring modulator; Tony  
Martin and crew, visuals.

PLAY! 4 - A Game Piece

A Collaborative Composition by

Morton Subotnik and Tony Martin

Cast: Gwendolyn Sims, soprano; Marijke Verberne,  
cello; Yujji Takahashi, pianist; David Rosenboom,  
vibraphone; Game Players - students and audience.

\*\*\* Short Intermission\*\*\*

L'S G A

Music Composed by Salvatore Martirano  
Three-Projector Film by Ronald A. Nameth  
Narrator, Politico with Gas Mask, Helium Bomb - M.C. Holloway

These and other outstanding mixed-media programs  
may be booked by contacting, THE ELECTRIC EAR,  
65 East 55th Street, N.Y.C. or through the Electric  
Circus Foundation, 23 St/ Marks Place.

THE ELECTRIC EAR is produced by Thais Lathem, with Morton  
Subotnik, Anthony Martin and David Rosenboom, artistic and  
technical advisors.

Program notes for Electric Ear concert, December 16th, 1968

by David Rosenboom

One of the problems in theorizing about art is the need for making up transitional concepts as a result of having divided things into categories as a first concern. Today we seem to be faced with the task of recombining those elements of art and music that used to be framed, detached, and categorized. After a one hundred and fifty year separation of elements that seems to be the Renaissance legacy, the closing of the media gap comes to a thundering culmination or maybe a thundering beginning here at the Electric Circus.

But let's not call it a mixing of the media or the multi--multi--something or the avant groove. Our problem is not simply that of filling an environmental space with the many facets of sensory input. Susanne Langer said, "The various arts exhibit a striking unity and logic," We are led to the point of visualizing a general unity and logic by the mediation of carefully controlled, refined, considered, (whether by intuition, feeling, or logical system), discrete, and specifically oriented events or elements. Let's not fall into the trap of the "fallacy of abstraction" of the most obvious properties of the materials of a particular medium and try to solve it by mere saturation of, yes, still separate and framed media. Saturation resulting from the "fallacy of abstraction" leaves our senses awash with an indeterminate gestalt. It is like whipped cream on bad cake, a senseless ornamentation as euphemism in language. Is this the Neo-Rococo age fraught with frills and overproducing?

No! It is not. A collection of media does not make for interesting media. No epicurian delights in simple mixed eating. Our interest at present is in one medium that we hope to present.

The works in the existing repertoire of this medium seem to orient their attack around one or several of three areas of perception and performance: theatrical, environmental, and participation. The technology of each is

different and we have examples of all of them. They are all environmental, existing so within the environment of the Electric Circus. As one must never make the mistake of competing with an existing environment that can't be changed, these pieces do not. It will be obvious that each of the works contains different inherent qualities and possibilities of adaption to available spaces.

A Triptych for Hieronymus , (1966), by Lejaren Hiller is a meeting ground for more elements of modern sound production techniques than anything that comes to mind. In its original version it is a mammoth collage of sound from our daily lives, animals, an instrumental ensemble that rivals any other in size, as well as from the computer and electronic music studio. Its theatrical and visual elements, here presented by Powell Shepherd and George Talbot respectively, are equally immense. It has been performed, however, very successfully in several condensed versions including that presented here and another version for two pianos and stereo tape. The performance technology tonight rests more on the visual element than anywhere else. Mr. Talbot uses many banks of slide projectors with special Buchla computer oriented control equipment, here provided by the Electric Circus, to achieve the extremely rapid pace of visual sequencing. Such a performance can also be reproduced with many people performing on the slide projectors according to a score made just as if they were playing musical instruments.

Mr. Hiller's techniques of collage, sometimes reminiscent of Ives, present a meeting of strong timely social elements. The music is very theatrical and many of the musical choices seem to be for their most giant like and sometimes unexpected dramatic impact. One feels that the intense sensory bombardment is carefully calculated in its information content to produce a defined degree of distortion in the reception of messages. As one sees in the related Bosch paintings the gross juxtaposition of conceptual reality, the grit of worldly life, violent theater, and a little theater of cruelty, he sees it even more prevelant in this total media presentation of Hiller--Talbot--Shepherd.

Ping, (1968), by Roger Reynolds, shows the greatest degree of actual electronic performance of the music presented here tonight. First, all of the live instruments are amplified with ordinary PA equipment. In addition, they are sent, via a rapid switching mechanism, into a ring modulator where they are modulated with a signal from an audio generator. The sound is then distributed among four output channels with a photocell sound distributor. Actual parts for the ring modulator and the photocell sound distributor are written in the score. All of this is then combined with the playback of a pre-

recorded tape. The equipment for this piece is easily packaged and performed and can be sent from performance to performance or built by a competent audio engineer.

One is reminded in Reynolds of a large repertoire or careful and imaginative instrumental music such as his Quick are the Mouths of Earth, and good theater in such pieces as the Emperor of Ice Cream. Ping's long involvement with slowly changing materials and economy of means are particularly arresting. Its visual elements include a setting of the story by Samuel Beckett of the same name.

Play! 4, (1965), by Morton Subotnick and Anthony Martin is the one participation piece on tonight's program. Certain members of the audience have been asked to participate and instructed in several games which are the moving force of the piece. The two films by Mr. Martin are the visual score for the game format and the succession of game possibilities. Each of the players is provided with game boards for 4 games: Signals, Lovme, Celebration, and End Play! The first three of them have a calculated degree of possible stalemate built in it which controls to a great degree the actions of the instrumentalists and soprano. The two conductor figures are participants in the games. The musical sound is a combination of instrumental and vocal elements with electronic sounds.

The use of such game processes in a live composition are particularly engaging because they present an immediacy of contact with the piece and the ability to watch the human relationships in it develop and influence the piece as it grows.

This kind of freedom and intimacy seem to always be qualities of the developments in media for which Mr. Subotnick and Mr. Martin are responsible. Mr. Subotnick, who uses some of the most advanced methods of electronic music synthesis today never loses his aesthetic to technology and it has been remarked that Mr. Martin is one of the most accomplished people in filling rooms with transistors specifically to make people free.

The economy of technology in this piece makes it ideal for easy packaging. One need only supply the two 16 mm film projectors with appropriate lenses, instrumentalists, game players, and stereo tape playback.

Attune to the theme of transistors one can see in Salvatore Martirano's L's G A, (1968), a remarkable application of musical disciplines and processes to Ron Nameth's films. An extremely high example of the integration of media, the measure of tension and the use



of psychological time is awsomey powerful.

The novelty of doing the things which were supposedly taboo in the past has worn off. It isn't easy to do things as jokes anymore and get away with it. Martirano isn't merely doing the tabooed thing, (such as using pieces of a pornographic film), but is using symbols as instruments of structure and motivation rather than as just representations.

Mr. Martirano is a master at taking advantage of the particular and very special qualities of certain individual unique performers. He has, for the past several years, been associated with a group of such people at the University of Illinois. One need only to recall such pieces as Underworld and Ballad to be reminded of saxophonist--clarinetist Ron Dewar and singer--pianist--organist--flutist Don Smith. The meeting ground for all these people has been in the highly original improvisation group, The Boarder Gaurd. L's G A is a perfect example of this in its stunning use of poet Michael Holloway.

This piece also produces its power with an economy of technical means. Three 16mm film projectors must be supplied along with stereo tape system, gas mask with microphone installed, and a tank of helium. The tape was produced at the University of Illinois Experimental Music Studio.

Does history show us a time in which there is evidence that its people were not aware of multi-media? Certainly not. Infatuation with multi media is not a new concern. It's really infatuation with the technological age which creates new media methods all of the time. Composers are now supplying packages of equipment to go with the scores of their pieces. Maybe the age of publishers will give way to the age of distribution of electronic packages.

In any case, all our senses are always on and it's pretty hard to isolate them. Radio actors are schooled in making their audience "see" the story. Television actors are schooled in making their audience "feel" the story. Environmentalists are schooled in making their audience ". . . ." the story.

Paul McCartney once said: "With any kind of thing, my aim seems to be to distort it, distort it from what we know it as, even with music and visual things and to change it from what it is to see what it could be. To see the potential in it all. To take a note and wreck it and see in that note what else there is in it, that a simple act like distorting it has caused. To take a film and to superimpose on top of it so you can't quite

tell what it is anymore, it's all trying to create magic, it's all trying to make things happen so that you don't know why they've happened. I'd like a lot more things to happen like they did when you were kids, when you didn't know how the conjuror did it, and were happy to just sit there and say 'Well it's magic.'"

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C

THE ELECTRIC EAR AND DAVID ROSENBOOM

Quotations may be used with appropriate credit.

## Campus Concert Men Look Into Mixed Media

By DONAL HENAHAN

The people who book concerts on the nation's college campuses, where about 70 per cent of all concert business is done these days, are running to keep up with their young audiences.

With talk of declining business giving many of them the jitters, they have arranged to look in on a new sort of attraction, the mixed-media event, when they come to New York Dec. 15 to 18 for their 12th annual convention.

The group, the Association of College and University Concert Managers, represents 425 institutions across the country. Its members will take a trip to Greenwich Village on Monday night, Dec. 16, to attend a specially arranged program at the Electric Circus.

The conventioners will see Salvatore Martirano's "L's G. A.," a piece for "gas-masked politico, helium bomb, three-projector films and two-channel tape recorder"; Morton Subotnick's "Play Four," a game piece composed in collaboration with the envi-

ronmental artist Tony Martin"; Lejaren Hiller's "A Triptych for Hieronymus" and Roger Reynolds' "Ping," which uses a film-projected Samuel Beckett text.

Mrs. Fanny Taylor, who is concert manager at the University of Wisconsin at Madison, and executive secretary of the managerial group, said in a phone interview that she had set up the organization's "Village" visit because "it is a great opportunity for the members to learn about an unusual type of presentation, done by well-known composers, in a place with excellent technical facilities."

The surprise of this season, Mrs. Taylor said, has been modern dance of the Merce Cunningham or Paul Taylor type. "Modern dance has been doing extraordinarily well—actually selling out in places where it couldn't attract half a house a few years ago.

The Dec. 16 program, presented by the Electric Circus Foundation, will be open to the public as well as to the visiting bookers.



The leading character in Salvatore Martirano's "L's G. A.," described as a piece for "gas-masked politico, helium bomb, three-projector films, two-channel tape recorder."

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THE NEW YORK TIMES, TUESDAY, APRIL 15, 1969

## Music: The Medium Electric, the Message Hypnotic

### Terry Riley Performs at Electric Circus

By HAROLD C. SCHONBERG  
THE refurbished, re-electricified, refitted Electric Circus swung into action last night. A lot of money has gone into the effort, including an architectural revision in which the place looks different depending on the location of the viewer. And where before there were speakers guaranteed to take the listener to the threshold of pain, now there is a setup guaranteed to rupture eardrums if ever one of the technicians goes off his rocker and pushes the volume control to maximum.

The guest at the first concert was Terry Riley. Every Monday through May 26 will see a mixed-media virtuoso taking advantage of the Electric Circus facilities. (The other nights of the week will see the normal dancing and allied entertainment.) Terry Riley is a pianist-saxophonist-composer-electronics specialist who has become one of the heroes of the new movement.

Unsmiling, he sat cross-legged before his equipment, which included an electronic organ, tape recorders and

percussion. Like a guru he lost himself in extended musical meditations. His thing is repetition of pattern to the point of hypnosis. His left hand, which must be made of one of the new unbreakable synthetic plastics, beats out a steady ostinato. His right hand makes fast variations, much like the old jazz pianists used to do. This goes on at considerable length. Mr. Riley has been known to prolong his sessions to as much as five hours, nonstop. Last night his first piece ran something under an hour.

One thought of Hovhannes, or Indian raga, of Cage, even of Stravinsky. Mr. Riley has clearly known all those contributions. He also takes full advantage of the electronic medium, using varying tape delays (as much as five seconds, instead of the usual milliseconds), setting the recorders at one set of rhythms and himself at another, to get wild polyrhythms.

His art is an art of repetition, and it evokes a highly visceral response. Mr. Riley achieves his point somewhat as the Indian musicians do. Time is suspended. He is full of ideas. One idea—either ingenious or Machiavellian, depending on how you look at it—occurred in the second piece. There Mr. Riley pulled a plug from one of

the amplifiers to create an open-circuit. This low-pitched sound—around a B flat?—kept going throughout the course of the composition, the longest pedal point in history. Meanwhile, Mr. Riley, on some sort of reed instrument, the tape recorders and David Rosenboom on violin and percussion, wove arabesques about it.

There was a little unhappiness on the part of the Electric Circus proprietors during the early part of the evening. Mr. Riley, music-oriented, did not want any projections. All he wanted were some solid colors behind him. And so the proprietor of the new and mighty color console looked glumly at the apparatus while Mr. Riley was preludeing upon the portable organ. In the second piece, Mr. Riley had a change of heart,

### Organ, Percussion and Tape Are Utilized

and the projectionists swung into action. Now there was the kind of total environment that mixed media represents. It would not be entirely correct to say that there never was a dull moment, for Mr. Riley's music courts dullness with its constant repetition of pattern. Dullness is part of its basic esthetic. Yet he can play like mad, and what he has to offer means very much to his audience. Pain is also part of his esthetic. At times the volume was so far up that eardrums started to flap, and it was not a pleasant experience. It hurt. Too much of this, and total environment could degenerate into total deafness.

THE NEW YORK TIMES, SUNDAY, APRIL 13, 1969



Thais Lathem, producer of the Electric Ear series of Monday night programs which starts tomorrow night at the remodeled Electric Circus. With her are three avant-garde composers to be represented on the series: from the left, Salvatore Martirano, Robert Ashley and David Rosenboom. She is not the naive butterfly often found fluttering around the fringes of the arts

## Multimedia's Mother of Them All

By DONAL HENAHAN



# Multimedia's Mother of Them All

By DONAL HENAHAN

THAIS LATHEM'S eyes have a strangely familiar look — concerned, intelligent, maternal. Where, you ask yourself, have you seen that look before? Ah, yes, it gazes out of old etchings and photos of Nadejda von Meck, Madame Récamier, Sylvia Beach and others who have mothered over the arts through the centuries. Mrs. Latham, who is director of the Electric Circus Foundation and producer of the alternately exhilarating and exasperating avant-garde series known as the Electric Ear, is one of those determined handmaidens whom the arts seem to discover whenever they are needed. A soft-spoken mother of four who dresses like the suburban matron she once was, and could hardly look less avant-garde, Mrs. Latham lives in Brooklyn. That is a significant fact of geography, for her long-range ambition is to bundle up the Electric Ear and carry it away with her to that arcane borough. "We want to develop one multimedia center that would pull together the talent now spread across the country," she says. "The center should be in New York, close to a mixed neighborhood, near schools and universities — and definitely not in a posh location."

The present Electric Circus location on St. Mark's Place is ideal for now (near New York University, which will start giving credits for attendance at Electric Ear events this month; in a polyglot, hippie-yippie-crazy area; definitely not posh). The Ear series, which started only last summer, will be back in the radically remodeled Circus for seven consecutive Monday nights beginning tomorrow. The series opens with a night devoted to works by Terry Riley, then goes on to Pauline Oliveros, Christopher YOUNG, the "Pulsa" group of environmental artists from Yale, Salvatore Martirano, David Rosenboom and Robert Ashley. Moreover, a fall series at the Circus is already being put together (Gordon Mumma, Eric Salzman and Lejaren Hiller are inked in, and other composers such as Luciano Berio and Lukas Foss are being considered for evenings of their own).

But Mrs. Latham has set her trajectory for Brooklyn, and with that in mind she and her chief musical adviser, the composer Morton Subotnik, have enlisted the aid of two additional art-mothers, Judith Blinken and Lucy Mann.

Mrs. Blinken, a Park Avenue patron of contemporary art and head of the Merce Cunningham Dance Foundation, has set to work with Harvey Lichtenstein of the Brooklyn Academy to develop a center for environmental art there. Mrs. Mann, wife of Robert Mann of the Juilliard Quartet, would help manage this and subsequent projects now fermenting in Thais

Latham's brain.

Mrs. Latham, whose husband is a deputy director of the Rockefeller Foundation, moved to the fringe of Brooklyn Heights from Hastings-on-Hudson ("I may be the only one in history who ever gladly moved from Westchester to Brooklyn") because she pined for the urban life but found Manhattan "prohibitive for one who needs four bedrooms." She is not trying to save subway tokens by moving the Electric Ear to Brooklyn, however. "I want to see it there because the whole community needs it. And, of course, there is the magic of the name—Brooklyn. Actually, I would like to develop the plan at the Circus, but they would have to give up their own business." The Circus owners, Jerry Brandt and Stan Freeman, are not likely to agree to that. They are doing extremely well with their multimedia rock shows, and are now fanning out to other cities.

"But, because of the Ear, the Circus has really changed its whole view of itself — from a discotheque to a type of theater," Mrs. Latham said. The recently completed \$200,000 remodeling job reflects this strongly, she feels.

If the Brooklyn Academy plan does not work out, Mrs. Latham has in mind finding another theater in Brooklyn to remodel, where her environmental artists could set up their wondrous wares for long periods at a time: no frustrating dismantling after each hastily rehearsed performance, as the present Circus arrangement makes necessary. "The Electric Circus affiliation came about by chance in the first place, you know. Eric Salzman and I had spent about a year developing the New Image of Sound series at Hunter College [an adventurous series that Salzman still directs]. That was the beginning of the whole intermedia showcase idea. Then one night we walked into the Circus and said, 'This is where Martirano's 'L's G. A.' belongs.'"

Mrs. Latham had seen Salvatore Martirano's work at Pratt Institute in Brooklyn. In it, a narrator wearing an amplified gas mask delivers an antiwar screed based on Lincoln's Gettysburg Address, by the poet Michael Hollo-way, to an obligato of taped sounds and film projections.

In the firm belief that she had seen a masterpiece, Mrs. Latham produced it at the Circus twice last year, once for an audience of university concert managers ("they were stunned," she says). She still thinks it a masterpiece, and will have it repeated on a program next month with other Martirano pieces, one for pop singer and poet called "Look at the Back of My Head for a While." Martirano is typical of the new composers, who work as dependent cells within a larger body of intermedia

artists. His particular kibbutz is at the University of Illinois in Urbana, one of the liveliest avant-garde centers in the world, but there are now scores of such groups doing work of which New York is only dimly aware. Each group has its own ideas, but in general they share a sense of mission: they want to unchurch the arts, to eliminate the old presentational, stage-bound tradition in concerts and the theater, and to encourage audiences to lose themselves in mystery and magic. They embrace science, and delight in flogging the old—old music, old theater, old politics, old social standards.

"The composers and other artists who get caught up in multimedia are more socially oriented than the previous generation—they care whether people listen," Mrs. Latham said. Many of them are plugged into the underground subculture across the country and build their works around topical questions — the war, race trouble, and so on. "Most of the musicians combine a knowledge of music and science that is found only in American youth. And they believe in group effort in a uniquely American way. You can't imagine British artists collaborating in this way—much too individualistic. But we have this indigenous American combination."

Mrs. Latham is not the naive butterfly often found fluttering around the fringes of the arts, confusing the scene with ill-informed enthusiasms and glib opinions. She studied the violin at Juilliard, then went on to do graduate work in music theory at Yale, and has been working for avant-garde composers ever since. In 1965 and 1966, while she was living in London, she became irritated at the provincial attitude of the British toward American music. With the aid of well-connected friends, she staged a four-month Festival of American Arts and Humanities for the American Embassy, on a \$3,000 budget.

When she came back to New York, she was appalled to find herself confronting a similar provincialism about the avant-garde. "These things — mixing media, experimenting with total environments — had been going on for a long time across the country. We had the O.N.C.E. group, headed by Robert Ashley and Gordon Mumma at the University of Michigan, and the San Francisco Tape Center, both in 1959. And the University of Illinois people had been doing such things as early as 1955." What New York recognized in the way of contemporary music for the most part was a few inbred groups of composers and performers who worked in academic seclusion. There was nothing as stimulating as could be found in, say, Buffalo, where Lukas Foss's intermedia

group was at work (and play).

But an interesting invasion of outlanders is now under way, bringing in people such as David Rosenboom, who worked with Martirano at Illinois, then was on the faculty at Buffalo, and has done everything, including playing the guitar and drums in rock groups. Now 21, and the technical and artistic consultant for the Electric Ear's forthcoming series, he will have one night, May 19, to show his own work, which he describes as heavily "computer oriented, and all with visuals. In one piece, an oboist (Lawrence Singer) and I play a duet. I play the analog computer."

Like Mrs. Latham, Rosenboom feels Brooklyn could well be intermedia's future Bayreuth. "But grants would be needed — maybe \$50,000 to start. At the Circus, we pay a couple of hundred in rent each night, because all they ask is that they don't lose money on us." Programs can't go on for less than \$1,000 each, and can easily run to \$5,000. So, at about 20 programs a year, plus salaries, \$50,000 would hardly be excessive.

Most of the Ear collaborators are not in it for the money, Rosenboom said. "Thais gets no regular salary. If there is any money on hand, she might take some, but nothing steady. This coming series will be run on money from the gate. That's understood by the composers and performers. If there's no money at the gate, they get no money."

The Electric Circus's \$200,000 remodeling — "very space-age, 2001-ish," Dennis Wright, vice-president of the Circus and co-director of the Foundation, calls it—includes installation of a 56-projector environmental control system devised by Donald Buchla, the West Coast designer of music synthesizers. With the new setup, all the Circus's shows can be programmed, put on tape and sent to Circus outlets in other cities.

So far, Electric Ear shows are not scheduled to be packaged and sent out across the nation in this futuristic way. That pioneering distinction is reserved for the Circus's rock shows. But Thais Latham — despite her longings for Brooklyn — likes the idea of mingling with the bright young brains at the Circus who could envision and perfect such a scheme. "Our composers, most of them, believe in letting culture lead them—as Beethoven and Mozart did. You just can't hang onto old styles forever."

As for uprooting the Electric Ear, she is not worried. "If an idea has life, you can transplant it anywhere."

PRESENTS

# THE ELECTRIC EAR

ELECTRONIC MUSIC & MIXED MEDIA AT

THE ELECTRIC CIRCUS

Works

of

Pauline Oliveros

with

Allan O'Connor, Percussionist

Monday, April 21, 1969

PROGRAM

I. "I of IV"

Music for double-feed back tape recorder  
loop

Visual environment by  
David Rosenboom and Pablo

II. "SOUND PATTERNS"

Visual environment by  
David Rosenboom and Pablo

III. "I'VE GOT YOU UNDER MY SKIN"

WORLD PREMIER

Al O'Connor, Percussionist assisted  
by David Rosenboom

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INTERMISSION

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Program will be repeated followed by music  
and dancing for everyone.

PAULINE OLIVEROS

Pauline Oliveros was born in 1932 in Houston, Texas. She studied composition with Robert Erickson and Thomas Nee and was a member of the San Francisco Tape Music Center from 1961 through 1967, working and touring with fellow composers Morton Subotnick and Ramon Sender. In 1966, she became Director of the Tape Music Center at Mills College and is currently Lecturer in Electronic Sound at the music department of the University of California at San Diego. She writes of the work presented here:

"I of IV was made in July, 1966, at the University of Toronto Electronic Music Studio. It is a real time studio performance composition (no editing or tape splicing), utilizing the techniques of amplifying combination tones and tape repetition. The combination-tone technique was one which I developed in 1965 at the San Francisco Tape Music Center."

ALLAN O'CONNOR

Allan O'Connor was born in Brooklyn in 1944. He studied music at Fredonia College and University of Illinois. He has worked with composers Cage, Martirano, Hiller, Cardew, Feldman, and Oliveros. "I've Got You Under My Skin" was commissioned by Mr. O'Connor in 1967. He is presently instructor of percussion at Northern Illinois University in DeKalb. Recorded for subsequent release are Lejaren Hiller and Allan O'Connor in Computer Music for Percussion Solo and Tape, which was premiered in the Electric Ear series last summer.

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SPRING SERIES  
ELECTRIC EAR

- April 14 - TERRY RILEY
  - April 21 - PAULINE OLIVEROS
  - April 28 - CHRISTOPHER TREE - SPONTANEOUS SOUND
  - May 5 - PULSA (Advanced electronic environments)
  - May 12 - SALVATORE MARTIRANO
  - May 19 - DAVID ROSENBOOM
  - May 26 - ROBERT ASHLEY
-

IN COOPERATION WITH NEW YORK CITY DEPARTMENT OF CULTURAL AFFAIRS

PRESENTS

# THE ELECTRIC EAR

ELECTRONIC MUSIC & MIXED MEDIA AT

THE ELECTRIC CIRCUS

CHRISTOPHER TREE

In A Program Of

## **SPONTANEOUS SOUND**

Monday, April 28, 1969

A concert for gongs, tympani, cymbals, bells, chimes, flutes, reeds and tibetan temple horn.

The instruments used in Spontaneous Sound are from many parts of the world including Japan, China, India, Tibet, Burma, Thailand, Indonesia, Turkey, Africa, Italy, Switzerland and American Indian.

Because of their spontaneous composition each concert is unique.

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In the last three and a half years, over 350 concerts have been given, mainly in the Los Angeles and San Francisco area. Seeking a wide audience range, SPONTANEOUS SPOUND has been presented in theaters, night clubs, and coffee houses, at nurseries, elementary, junior and senior high schools, colleges churches, museums, libraries, prisons and juvenile halls.

### TONIGHT'S PERFORMANCE

Tonight's performance is a benefit for SPONTANEOUS SOUND. The funds raised will enable them to appear in hospitals, prisons, churches and parks in the New York area under the auspices of New York City's Parks, Recreation, Cultural Affairs Administration and The National Council of Churches' Church and Culture Program.

# THE ELECTRIC EAR

AT THE ELECTRIC CIRCUS  
MONDAY EVENINGS.

## NEXT WEEK

PULSA : A GROUP OF 10 ARTISTS, ALL  
MAY 5TH RESEARCH ASSOCS. AT YALE  
UNIV., WILL CREATE AN  
ELECTRONIC ENVIRONMENT.

.....

MAY 12TH - SALVATORE MARTIRANO  
"LOOK AT THE BACK OF MY  
HEAD FOR AWHILE." & "L'S G A"

MAY 19TH - DAVID ROSENBOOM  
A LIVING COMPUTER MIX  
VISUALS & CHOREOGRAPHY BY  
ANNE WILSON.

MAY 26TH - ROBERT ASHLEY  
ELECTRONIC PSYCHO-DRAMA  
& "WOLFMAN MOTORCITY REVIEW"

PRESENTS

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# THE ELECTRIC EAR

ELECTRONIC MUSIC &amp; MIXED MEDIA AT

THE ELECTRIC CIRCUS  
PULSA

CREATES AN ELECTRONIC ENVIRONMENT

Pulsa was formed in 1966 to develop varieties of environmental art based on the control of perceptible wave energies. To date their work has focused on abstract time-extended phenomena articulated by plastically changing presences of light and sound. Intended for the public, their work is designed to involve its audiences more richly in the increasingly complex networks of electronic information which constitute an important part of evolving world ecology.

Affiliated with Yale University as Research Associates in the Arts, Pulsa is comprised of nine artists with backgrounds including painting, architecture, film-making, physics, psychology, mathematics and computer programming. They are deeply involved in electronic technology with particular emphasis on computerized intelligence. Though their project is largely self-supporting, they operate under a \$10,000 grant from the Graham Foundation.

Presently, Pulsa is involved in the preparation of a major project for New York City: the installation of a quarter-mile square matrix of light and sound sources in Central Park's Sheep Meadow in September of this year. A set of 128 speaker strobe units will be installed and computer programmed. The resulting spectacular event will be visible not only from inside the matrix and from points of vantage within the park, but also from buildings with a view of the Sheep Meadow throughout Manhattan.

Pulsa invited anyone interested to come to their current research installation in Woodbridge, Connecticut. Located in a seven acre country field and programmed by elements of analog and digital computers, this installation consists of a matrix of fifty-five strobe-speaker output devices. Almost any evening during the next several months is a possible time. Please call one of these numbers to make an arrangement:

Woodbridge Field Office: 203-393-1889 or 203 772-0880 ext.24

Home offices: 203 624-8152 (M.C.) 203 787-2932 (P.C.)  
203 772-0198 (W.C.) 203 426-6777 (D.R.)

Mailing Address: Pulsa

Yale School of Art and Architecture  
180 York Street  
New Haven, Conn.

Personnel: Walter Bloch, Michael Cain, Patrick Clancy, William Crosby, William Deusing, Paul Fuge, Peter Kindlmann, David Rumsey, Al Rubottom

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May 12- Salvatore Martirano - Two Channel Tape Recorder  
Multi-projector Film, Narrator with gas-mask.

May 19- David Rosenboom - Live Computer mix

May 26- Robert Ashley - Electronic psycho-drama

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Concerts begin at 8:30PM  
Followed by music & dancing for everyone

# THE ELECTRIC CIRCUS

Electronic Music & Mixed-Media at The Electric Circus

IN HONOR OF COMPOSOR'S WEEK

DAVID ROSENBOOM

HOW MUCH BETTER IF PLYMOUTH ROCK HAD LANDED ON THE PILGRIMS  
(living computer mix)

with soloists:

Lawrence Singer-Oboe

Anne Wilson-Dancer, Choreographer

assisting artists:

Thos. G. McFaul, Lynn D. Newton, Richard Stanley

general assistant:

William Rouner

...PLYMOUTH ROCK....is a live computer electronics performance by the composer, occasionally with assisting musicians. A careful study of the geology and ecology of the St. Marks area of New York has yeilded significant temporal resonances and macrostructures which will generate relationships in tonight's Electric Circus improvisations.

Other pieces that will be presented (not in order) are:

No.1 from four soundings from

URBOUI, (1968)

#1.Pear Facts-for tape and film

film by Robert Lieberman

A pataphysickal excursion through; the question: Morality is always derived from the innate structural order of the world? So I have heard: "Dissatisfaction of the flish does not leave a man relieved of his passions." Thus: Everybody knows that it is a common characteristic of magic that one can produce a desired effect by imitating it.---

AND COME UP DRIPPING, (1969) for oboe solo and analog computer

Lawrence Singer - Oboe soloist

"The sun- or sky - god descends to fructify the frozen earth in rain and lightning; there is a period of waiting; then the Young God is discovered in the first bloom of spring."

THE THUD, THUD, THUD OF SUFFOCATING BLACKNESS, (1966-7)

Anne Wilson - dance, choreography and visuals

Commissioned in 1966 by G. Alan O'Conner and William Youhass, this is a piece for two percussion constructions, alto saxophone, piano-celeste, electric cello, prerecorded instruments and sound rotator. A taped performance by these percussionists will be played. The rhythms of nature are the primary force in the shaping of the patterns of religion. Religion has produced the festival and the festival has produced performance. An arrangement of universal intervalic ratios derived from using the length of the piece as a fundamental or "key" has resulted in the sounds, silences and tempo.

All films used by Robert Lieberman

All other visual elements by David Rosenboom



DAVID ROSENBOOM---Composer-Performer, (violin, viola, piano, trumpet, percussion) Conductor-Physics Researcher. Considerable background in experimental physics and electronics has led to intensive activity in development of portable computer synthesis systems for various media performances. Artistic Advisor to Electric Ear series 1968-9 Artistic Coordinator Electric Circus, 1968, Creative Associate in the Center for the Creative and Performing Arts of the State University of New York at Buffalo, 1967-8, University of Illinois Contemporary Chamber Players, 1965-7, work in University of Illinois Experimental Music Studio with Lejaren Hiller, composition studies with Salvatore Martirano and Gordon Binkerd, can be heard as performer of new music on RCA, MGM-Heliodore, and Columbia Records, has been active as performer with and producer of several rock groups. His composition THE WE WOUND THROUGH AN AURA OF GOLDEN YELLOW GAUZE recorded for subsequent release by Columbia Records, TO THAT PREDESTINED DANCING PLACE filmed for video tape by Don A. Pennebaker for PBL and broadcast nationally several times by NET, Conductor, Quincy Summer Symphony, Quincy, Ill. 1966 season, performances on major arts festivals including University of Ill. Contemporary Arts Festival, Buffalo Festival of the Arts Today, and in Japan and Europe, SHE LOVES ME, SHE LOVES ME NOT---written for Cross Talk Intermedia, Tokyo, 1969 has been active as soloist and guest conductor with major midwestern symphony orchestras, attended University of Illinois; N.M.C.; Interlochen, Michigan, grew up in Quincy Ill. born Fairfield, Iowa, September 9, 1947, Virge, began musical studies at age 4 under tutelage of dear old Mom.

LAWRENCE SINGER---Composer-Oboist-Lecturer-Author. B.M. Eastman School of Music. Co-author of oboe method (Bartolozzi-Singer) involving new woodwind techniques due for release, shortly, in English and Italian by Edizioni Suvini Zerboni, Milan, Italy. Artist in residence (composer-oboist) from 1967-69 at the State University of New York At Buffalo. Active exponent of new woodwind techniques. Lecture-demonstrations include University of Pennsylvania Juilliard School, Eastman School, S.U.N.Y. at Buffalo and others. Oboe soloist in the Maggio Musicale Fiorentino, 1966, and oboe soloist in the Festival Internazionale di Musica Contemporanea, September 1968 (Bartolozzi, "Concertazioni for Oboe"), Venice, Italy, recorded for the RAI-TV Italiana di Roma.

ANNE WILSON- Anne Wilson is a well-known New York Choreographer and dancer.

The last of twenty-one concerts for the year is being presented on Monday, May 27th. The works of Robert Ashley, one of the most important avant-garde composers, will present his famous "Wolfman", an electronic psychodrama. Mr. Ashley is co-founder, and Director of the ONCE Festival in Ann Arbor, Michigan, one of the liveliest experimental music centers in the world. THE ELECTRIC EAR began on May 27th with John Cage's REUNION, and has become the major showcase of American experimental music, with emphasis on electronic and mixed-media. The International Music Congress, The Music Critics' Association, The Music Educators National Conference, The Association of College and University Concert Managers, Composers Recognition Week, and the U.S. Department of State official visitors, have all attended THE ELECTRIC EAR in official capacity as part of programmed tours. Nineteen Composers have been featured; John Cage, Morton Subotnik, Mel Powell, William Russo, Pauline Oliveros, Roger Reynolds, Michael Sahl, Salvatore Martirano, Lejaren Hiller, David Behrman, Alvin Lucier, Christopher YOUNG, David Rosenboom, and Robert Ashley. Leading artists including Anthony Martin, PULSA, and Ann June Paik, and gifted filmmakers such as Stan Van der Beek and Ronald Nameth have all been presented. THE ELECTRIC EAR is produced by Thais Lathem with the co-operation of the Electric Circus Foundation, Dennis Wright, Co-Director; David Rosenboom, artistic and technical co-ordinator; Lucy Mann, Consultant for Management and Production. Greatful acknowledgement is extended to Morton Subotnik, Anthony Martin, Eric Salzman, Ben Patterson and Ted Coons, for advice and support throughout the series.

# *The Music of David Rosenboom*<sup>1149</sup> *Dovetails With Dance and Slides*

By THEODORE STRONGIN

David Rosenboom, a young man from Iowa who has been much in evidence helping other composers at the Electric Ear series at the Electric Circus, had a program to himself there last night, and high time.

In the new area that has been called environmental or mixed media and other descriptive names, the 21-year-old Mr. Rosenboom is sure-eared, sure-eyed and inventive, and he knows his way around electronic sound equipment, too.

He is particularly adept in sensing the relationship between sounds, sights and movements and balancing them against each other. He makes them work for each other. Even when his ideas are not wholly successful, they are worthy ideas.

His two strongest works last night were altogether different in nature. One, "The Thud, Thud, Thud of Suffocating Blackness" (1966-67) was more conventional than "How Much Better If Plymouth Rock Had Landed on the Pilgrims," though both had a certain impishness in common, an airiness barely approaching humor.

The music for "Thud," played on tape, was a wildly thrusting, banging, ear-clearing succession of dissonant and percussive blats, thunderclaps, searing saxophone and electric cello passages. But, just as the dance with it, abstract, and surrealistic the Miró-like slides flashed on one wall, the music had a strong sense of direction. It started, it developed, it went somewhere. That was the conventional element, its sense of direction; in this case "conventional" means strength, not lack of imagination.

True, the dancer (Anne Wilson) was swamped by the power of the music and the happy aptness of the slide projections. But "Thud" was still an experience. When it was

over, you knew you had been through something.

In "Plymouth Rock," faint and ethereal cloudy lines were seen against a darkened screen, shifting slightly, while Mr. Rosenboom gradually built up to a shattering, belfrylike surrounding of electronic sound. This was total environment music, but it was a very supporting environment to be in the midst of.

In "Pear Facts," the first part of "Urboui," a larger work for tape and film, Mr. Rosenboom's discreet tape sounds supported a rather slight, allegorical film by Robert Lieberman in which pears were animated and given the foibles of humans.

The other work heard was "And Come Up Dripping," in which films of what looked like minnows darting in colored lights provided the chief interest. Otherwise, during "Dripping," an oboist, Lawrence Singer, squeaked through a rather uninteresting dialogue with a computer. Electronically, it may have been a feat, but not musically.

THE ELECTRIC CIRCUS FOUNDATION

PRESENTS

# THE ELECTRIC EAR

ELECTRONIC MUSIC & MIXED MEDIA AT

THE ELECTRIC CIRCUS

ROBERT ASHLEY  
WITH  
THE ONCE GROUP

MONDAY MAY 26, 1969

The Trial of Anne Opie Wehrer and Unknown Accomplices for Crimes  
Against Humanity by Robert Ashley

Performers: Anne Wehrer  
Mary Ashley  
Cynthia Liddell  
George Manupelli  
Joseph Wehrer

Lighting: Mary Ashley  
Harold Borkin  
Nick Bertoni

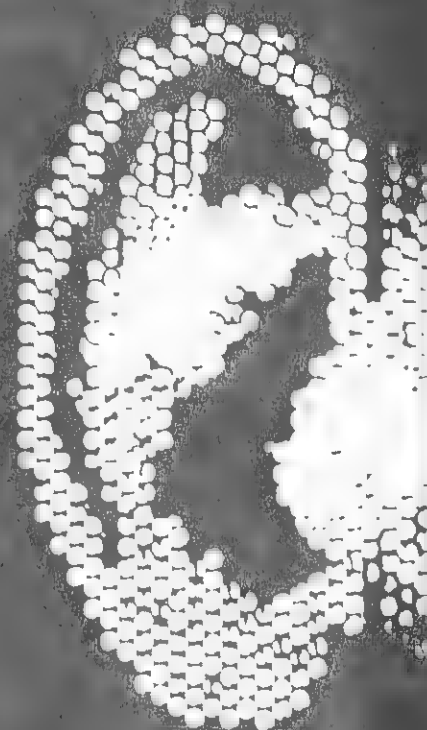
Technical Assistance: David Behrman  
David Rosenboom

The Trial.....was begun on April 30, 1968 in Sheboygan, Wisconsin  
and has been continued since in nine performances in California,  
Colorado, and the midwest.

It is a discussion of the attitudes and practices that make up Mrs.  
Wehrer's world. The discussion is guided by a series of questions  
directed at Mrs. Wehrer. The questions are on a prepared tape and  
must be dealt with in the order they appear. Otherwise, everything  
that makes up the performance is improvised by the five performers.

Robert Ashley - Born 1930. Co-founder of the annual Once Festival  
of Contemporary Music (Ann Arbor, Michigan) and coordinator of the  
Once Group. He lives in Ann Arbor, Michigan and works as a producer  
of sound-tracks for commercial motion pictures.

visual light show  
living computer mix  
theater of interaction  
audience participation  
ritualistic sensory environment



**THE ELECTRIC EAR**  
*Electronic Music & Mixed Media*

*How unsettling it is to hear such interesting music brought to life by a mechanical midwife, while supposedly human composers go on turning out stillborn works.*

Donald Henahan, N.Y. Times  
review of *Electric Ear*, Aug. 1968  
"Machine Music" by Lejaren Hiller

Experimental music is no longer merely experimental. Fruits of these experiments are finding application in the general life of our culture; the concert halls, the dance recitals, art museums, TV commercials, and in youth centers. We all realize that scientific knowledge has achieved a phenomenal rate of expansion in the Twentieth Century. We might as well recognize that this has happened in the arts as well. Consequently, the developments that grew out of a few small centers ten years ago have now encompassed our vision of one hundred years hence.

The composers and artists most responsible for the conception and development of this multi media movement were anchored in their few small centers by the hardware technology of the past. The explosion of computer software technology and its humanist application by these composers, has encouraged widespread involvement by traditionalists as well as the avant-garde.

The *ELECTRIC EAR* announces, for the first time, a newly developed, patented, and truly "state of the art" electronic equipment for all performance situations. This computer-oriented set-up allows for maximum portability, flexibility and reliability at an amazing low cost. The time consuming setting up of bulky equipment is a thing of the past. NEURONA COMPANY, has developed and manufactured this important equipment, a multi media production package, an entire computer synthesizer set-up and audio visual control consoles ALL PACKAGED IN BRIEFCASES. Neurona equipment is designed and built by David Rosenboom, composer; and William Rouner, engineer.

This enables *THE ELECTRIC EAR* to present the variety, the scope and the magic of multi media with the leading innovators in the field, and with the most advanced developments of our time.

*THE ELECTRIC EAR* presents the creators of multi-media, with emphasis on the composers who have been responsible for its development. From San Francisco TAPE MUSIC CENTER, founded by Morton Subotnik and Ramon Sender, began the practice of multi-media. Here Tony Martin collaborated and developed the popular light show and combined it with rock music and electronic music. This combination was seen at the Fillmore West in San Francisco, and later at the Electric Circus in New York. Realizing the futility of presenting electronic music alone in a concert situation, these

**Directors:**  
Thais Latham  
Tony Martin  
David Rosenboom  
Morton Subotnik

## SAMPLE PROGRAMS

### I CONCERT PRESENTATIONS

Tony Martin	COMPOSITION FOR SILENT LIGHT a visual light show
Lejaren Hiller	MACHINE MUSIC trio for tape, piano and percussion Neely Bruce, Piano; Al O'Connor, percussion
Morton Subotnik/ Tony Martin	THE WILD BULL tape with visuals
Pauline Oliveros	NIGHT JAR, electronic music theater of the absurd Jacob Glick, viola d'amore; Lynn Lonidier, visual
Salvatore Martirano	"L's GA"
	Three Projector Film by Ronald Nameth Michael Holloway, Narrator-Actor, "Politico" with Gas Mask, Helium Bomb and electronic tape.

### II ENVIRONMENTAL PRESENTATION

RITUALISTIC SENSORY ENVIRONMENT a tripart collaborative, homogenous performance by composers participating in each others works, forming a flow of sensory experience not divided by "stops" and "starts". Performance will be in progress as audience enters and, with no intermission, mobility of audience is usual. From different positions in the performance space, the visual will be altered from one position to the next.

- I NADAM by John Hassell
- II A RAINBOW IN CURVED AIR by Terry Riley
- III HOW MUCH BETTER IF PLYMOUTH ROCK HAD LANDED ON THE PILGRIMS by David Rosenboom

### III THE DISCOTIQUE

Here the artists will collaborate with local groups or students to make their own environmental discotique. Visual artists will help to adapt screens and latest techniques of light shows will be set up. Composers will work with performers and rock groups to show them how.

### IV THE WORKSHOP

With any of the performances above, demonstrations, lectures and teaching facilities can be offered by the performing composers and artists

*A concert may be presented for one night*

*A Three Day Environment may take place with the concert, workshops and Environmental Presentation*

*A Five Day Environment may take place to include two presentations, workshops and the Discotique*

*Other programs available on request*

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resident composers began to work with dancers, instrumentalists, actors and film makers. Here, Pauline Oliveros worked on her music theater of the absurd.

The ONCE FESTIVAL in Ann Arbor, Mich., founded by Robert Ashley and Gordon Mumma, developed new uses of sound, with theater - the psycho-drama, environments, and film.

Both of these centers received no outside subsidy, and their leaders and students are to be found in every major cultural center in the country.

Lejaren Hiller began the experimental music department at the University of Illinois, Urbana. Soon it was to become the major center for new music in the country. Salvatore Martirano is still associated with this department.

The first national and international notice was given this movement through *THE ELECTRIC EAR* series at the *ELECTRIC CIRCUS*, 1968-69. Morton Subotnik, Tony Martin and David Rosenboom were artistic directors. The Electric Circus provided a non-profit foundation so that important events could be presented there. Thais Latham proposed the *ELECTRIC EAR* program and acted as its director.

The International Music Congress gave international notice to this uniquely American effort and requested a special concert for their distinguished visitors from all over the world. The Electric Ear presented twenty concerts in 1968-69, featuring twenty composers. Several of these events were scheduled outside New York and are now available for travel throughout the U.S.

"Each generation must rediscover its own revolutionary truths, and something oddly different is being heard in certain experimental works.....Music, and perhaps any art, the composers seem to be saying, is an allusive, never a specific way of addressing the human mind, a magical way of inventing a kind of reality out of the universe's chaos....."

Donald Henahan, N.Y. Times review of summer *ELECTRIC EAR* series, "Too Soon Too Demand 'War and Peace'" Sept. 1968

### COLLABORATING ARTISTS

Robert Ashley	Ramon Sender	Nam June Paik
John Cage	Mel Powell	Takahika Imura
Lejaren Hiller	Christopher Tree	Anne Wilson
Alvin Lucier	David Rosenboom	Joel So egeiman
Salvatore Martirano	Kenneth Cabura	Al O'Connor
Gordon Mumma	Jon Hassell	Jacob Glick
Franklin Morris	Tony Martin	Lynn Lonidier
Richard Fecliano	PULSA	Michael Holloway
Pauline Oliveros	Stan van derBeek	Yugi Takahashi
George Talbot	Powell Shephard	Neely Bruce
Roger Reynolds	Aldo Tambellini	James Signorelli
David Behrman	James Signorelli	Don Smith
William Russo	Ronald Nameth	THINK DOG!
Michael Stahl	William Wegman	Ron DeWan
Eric Salzman	Paul Zukowsky	Irma Ruten
Morton Subotnik	David Tudor	Harold Wicks
		Robert Lieberman

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Peripheral equipment also available: Power Supply for 115 VAC, Manual DC Control Voltage Source Network.

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VICE-PRESIDENT

...we've been in training. Mother Nature, believing we're ready as we'll ever be, is slowly handing over the controls of the earth to us. It is now our responsibility to make it work! We need technology to do it and for this reason it must be made accessible. We need to take science out of the hands of the military-industrial complex and give it to the people whose goals are things that work, "doing" with the greatest ease, and sending through systems the kind of energy that will direct their aims in the best way possible. NEURONA Company seals the bond between artists and technology, a bond which is one large hope for the humanization of government, industry, and the imminent instantaneous communication network that will link all men.

## NEURONA COMPANY OFFERS:

### DESIGN AND DEVELOPMENT SERVICE FOR MEDIA ARTISTS

NEURONA COMPANY people can provide the best custom multi-media engineering for realizing your technological ideas and solving your problems with projects and shows. The most advanced research techniques and production processes are employed to bring you scientific and electronic concepts that are up to date and even of the future. We stay with you throughout all stages, initial estimate to manufacture. Our scientists, engineers, and artists can take on any project regardless of the amount of research required or technical complexity necessary. Whether it be for design, development, production, or manufacture, everything is specifically tailored to your requirements. So bring your technological media problems to NEURONA COMPANY, be they applying improvisations to cybernetics, putting performance into programming, planting a synthesizer on the moon, or just plain special effects engineering.

### MULTI-MEDIA PRODUCTIONS - THINGS AND EVENTS

NEURONA COMPANY, producer of ideas, developing an institution capable of realizing media ideas in the belief one can "produce" his and others' ideas in the way he would "perform" musical "pieces." Our goal is producing our ideas and even commissioning ideas from other media people; taking advantage of available commercial distribution methods.

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Intermedia -  
A New Art Form?  
Thais Latham

American Embassy June 25, 1970



PROGRAM

LARRY AUSTIN      Transmission One (1969)

"In Transmission One, video and audio signals interact in what I term an 'electronic video/audio syndrome'; i.e., electronic concurrences between sound and sight. The work utilizes no television cameras. You see no images you might expect to see on a television viewing screen. Instead, various geometric and trigonometric forms appear in kinetic sequence. The sounds which, in a sense, produce the picture, are electronically synthesized and are also in kinetic sequence. This relationship between sound and sight is complex and interesting, and controlling such a syndrome is fascinating to me as material for art."

LEJAREN HILLER      "Nightmare Sequence" from  
A TIME OF THE HEATHEN (1961)

Excerpt from full-length film written and directed by Peter Kass and filmed by Ed Emschwiller.

SALVATORE MARTIRANO      L's GA

Multi-Channel Electronic Tape Score with poet-narrator Michael Holloway as "gas-masked politico with helium bomb."  
Multi-Projector Film by: Ronald Nameth

JAMES SEAWRIGHT      Capriccio for TV

Designed and directed by James Seawright  
Choreographic Material by Mimi Garrard  
Sound Score by Beulent Arel  
Produced at WGBH Boston; Sponsored by National Educational Television.

DAVID ROSENBOOM      Pear Facts  
Excerpt from URBOUI (1968) (Film by Robert Liberman)

"A pataphysical excursion through; the question; Morality is always derived from the innate structural order of the world? So I have heard: "Dissatisfaction of the flesh does not leave a man relieved of his passions." Thus; Everybody knows that it is a common characteristic of magic that one can produce a desired effect by imitating it....."

over

MORTON SUBOTNIK

The Wild Bull

"There was never an attempt to 'portray' the poem (I don't think music is about that), but at the same time it became harder and harder to disassociate myself from the pathos and restrained cry of personal loss which spoke to me from such a distant point in time. The state of mind which the poem evoked became intimately tangled with the state of mind my own composition was evoking to me."

TERRY RILEY

A Rainbow in Curved Air

All the music heard is played by Terry. He plays the electric organ, electric harpsichord, rocksichord, dumec and tambourine.

## PROGRAM NOTES

THAIS LATHEM - presently director of Intermedia Institute at the Automation House, N.Y.C., supported by the N.Y. State Arts Council and The American Foundation on Automation and Employment. Formerly, Director of NEW IMAGE OF SOUND series of Contemporary Music concerts at Hunter College, N.Y.C., and Producer of The Electric Ear series of multi-media concerts at the Electric Circus, N.Y.C. While in Britain, she was honorary secretary of MacNaughten Concerts, and was music advisor to the U.S. Embassy. She is currently on the Board of ISCM, N.Y.C. and New York Pro Musica.

LARRY AUSTIN - born Oklahoma, 1930. His compositions have been played by the N.Y. Philharmonic, National Symphony, the Oklahoma Symphony Orchestras, and the Boston Symphony at Tanglewood. His chamber music has had wide range of performances all over the world. Since 1958, he has been professor of music at the University of California, Davis. In 1963, he, along with colleagues at Davis, formed the New Music Ensemble, a group of composers-performers devoted to performance of contemporary music and to evolving new concepts of free group improvisations. He is Editor of Source Magazine.

LEJAREN HILLER - born N.Y.C., 1924, well-known innovator of computer composition. Founded the Experimental Music Dept. at the University of Illinois, Urbana, Illinois, in 1958. Wrote the first composition for computer, Illiac Suite. Mr. Hiller came to music through the sciences, and was formerly professor of Mathematics at the University of Illinois. He is currently co-Director with Lukas Foss of the Buffalo Center of Creative Arts, and of the Electronic Music Dept. there. Studied Mathematics at Princeton, and Electronic Music with Milton Babbitt.

SALVATORE MARTIRANO - born Yonkers, N.Y. 1927. Studied Oberlin, Ohio. Played Jazz piano. Won numerous prizes. Presently Professor of Music University of Illinois Experimental Music Dept.

TERRY RILEY - M.A. at University of California at Berkeley, studied with Seymour Shifrin. Background involvements with ragtime, jazz, rock, country and western, electronic, African and Indian musical forms. Honky-Tonk piano in Paris, Street Theater in Scandinavia, collaborations in San Francisco with La Monte Young, Ann Halperin and Ken Dewey. Performances include: POPPY NO GOOD's PHANTOM BAND PURPLE MODAL STROBE ECSTASY WITH THE DAUGHTERS OF DESTRUCTION for the Intermedia '68 series in N.Y. State Colleges. Born California 1932.

DAVID ROSENBOOM - born Iowa, 1947., composer-performer (violin, viola, piano, trumpet, percussion), conductor and physics researcher. Background includes founding Rock Group THINK! DOG, and conductor of Quincy Symphony. Studied composition with Salvatore Martirano, and Lejaren Hiller at the University of Illinois, and as a Creative Associate in Center at Buffalo. Artistic coordinator of Electric Ear series and The Electric Circus, N.Y. Intensive activity in development of portable computer synthesis systems for various media performances. President and founder of Neurona Company.

JAMES SEAWRIGHT - born Mississippi, 1936. B.A. English at University of Mississippi. Began sculpture in 1958 in Navy. Attended Arts Students League, N.Y. where he has worked since in various media, and since 1963, has made sculptures with lights and motion. He is technician to Alwin Nikolais, at Henry Street Settlement, N.Y.C. He is Technical Supervisor at the Electronic Music Center at the Columbia-Princeton Center. He has presented several collaborative works with choreographer, Mimi Garrard. He has current exhibits at the Stable Gallery, N.Y.C. and recently with the Magic Theater, Automation House, N.Y.C.

MORTON SUBOTNIK - born Los Angeles, 1933. M.A. from Mills College, California. Studied with Leon Kirchner and Darius Milhaud. Solo Clarinetist in Denver and San Francisco Symphonies. Co-Founder of Mills College Performing Group in 1959 and the San Francisco Tape Music Center. The two centers are now combined, and subsequent Directors are a Who's Who of Intermedia Innovators (Ramon Sender, Anthony Martin, Pauline Oliveros, Robert Ashley). He became Musical Director of the Repertory Theater at Lincoln Center, and Composer at the Intermedia Center at New York University, which contains the modular electronic music system he helped create with Don Buchla at the Tape Music Center. With Anthony Martin, created famous rock-electronic-light show combination at Fillmore West, San Francisco, and at the Electric Circus in N.Y. and Toronto. Musical Director of Electric Ear. Presently, Associate Dean, and Composer in Residence at California Institute for the Arts, Valencia, California. With Anthony Martin created famous Game Pieces, PLAY ONE, and PLAY FOUR.



## INTERMEDIA AT AUTOMATION HOUSE

49 East 68 Street, New York.  
Tuesday October 13, 1970 at 9 PM  
For Reservations: 628-1010

### 1970-71 SEASON

- OCT 13 1970 Zone**  
First New York appearance of Boston artists.
- NOV 20 1970 Gordon Mumms**  
A collaborative electronic, musical and social ensemble with David Behrman, Anthony Braxton, Jazz Saxophone, and artist Robert Watts.
- DEC 4 1970 David Rosenboom**  
A living computer mix.
- DEC 14 1970 Electric Stereopticon**  
First New York appearance of the intermedia performance group featuring the avant garde percussionist, Al O'Connor, and pianist, J.B. Floyd, with artists from the University of Northern Illinois.
- JAN 27 1971 Salvatore Martirano**  
"Let's Look at the Back of My Head for Awhile"  
New York Premiere of an environmental work.
- FEB 12 1971 Gerald Shapiro**  
From "The Yellow Castle", an audience activated work. New York debut of the Brown University composition group.
- FEB 27 1971 Lejaren Hiller**  
Composer will perform an evening of his works.
- MAR 13 1971 Kenneth Gaburo**  
First New York appearance of "gesture music" performed by NMCE III.
- MAR 26 1971 Morton Subotnik**  
Premiere of "Sidewinder", electronic sound action music within a total score of light and film.
- APR 1971 PULSA**  
PULSA will present an electronic environment.
- APR 1971 Franklin Morris and Aldo Tambellini**  
An Oscilloscope Event.
- MAY 1971 Milton Babbitt**  
Composer will perform an evening of his works.

Intermedia Institute has been established through the generous support of the New York State Council on the Arts and The American Foundation on Automation and Employment. The director of Intermedia Institute is Thais Lathan. Administrator, Lucy Mann. Artistic and Technical Coordinator, Gordon Mumms.

## Art Experiments In Mixed Media Will Be Traced

Intermedia at Automation House, a series of 12 experiments in artistic and technological cross-fertilization to be presented this season in the converted mansion at 49 East 68th Street, seeks to create a dialogue between industry and the arts, according to Thais Lathem, the program's director.

She explained yesterday to a preview audience that the 12 programs beginning tonight would give a "history of experimental art in the United States, from Milton Babbitt to the newest in computer technology."

A film-and-sound sample of the opening program, by ZONE, a group of 13 Boston artists, was presented. A press release warned that ZONE's work combines "painting, film, electronics, dance, theater and music to provide a kind of visual-cerebral circus," with results that aim at "the subjective clarity of madness."

Later attractions in the series, which extends into April, include an evening with Gordon Mumma, one of the pioneers in media-mixing; David Rosenboom, in "a living computer mix and brainwave participation"; the Electric Stereopticon; Salvatore Martirano; Gerald Shapiro, and Mr. Babbitt.

The Intermedia program is supported by the New York State Council on the Arts and the American Foundation on Automation and Employment.

## Art Notes

By GRACE GLUECK

### ELECTRO-VANGELIST

Meanwhile, back in New York, Automation House, the electronic-age communications and mediation center, has been invaded by a slightly groovier program. Called "Intermedia at Automation House," its plugged-in agenda boasts 12 items, ranging from young David Rosenboom's "living computer mix and brainwave participation work" to a relatively sedate electronic music concert by Milton Babbitt. The program opens Oct. 13 with a performance by "Zone," a multimedia theater troupe from Boston that combines live action, multiple film and slide images, "cabalistic sound" and electronic sets in a "kinetic ritual tableau."

"Intermedia" (which runs through April) was generated by Thais Lathem, a sort of electronic evangelist who

comes out of old-brain music (she studied composing with Arnold Schoenberg). "The overwhelming revolution in technology has come to the arts, though the establishment doesn't recognize it yet," she says. "The advent of the computer that enables complex things to be done in a simple way has made intermedia very easy to package and move around. I see it as one medium combining several forms—music, theater, the visual arts. It's indigenously American, like jazz, and we need to develop our own tradition."



Intermedia performer at Automation House  
Very easy to package and move around

In the vanguard of intermedia, Miss Lathem holds, is today's young composer, who uses technology as an aid. "He doesn't have to go to engineers for help—he designs his own equipment and makes an esthetic of it. He's his own well-organized producer and manager. He's very group-oriented and he tries to relate his work to what's happening in the world. I use the term 'composer,' but we need a new name."

The program, which Miss Lathem regards as intermedia's first real all-out exposure in New York, will cover the country. Besides the work of Milton Babbitt, head of New York's Columbia-Princeton Electronic Music Laboratory, for example, it will present that of such old masters as Lejaren Hiller of Buffalo, a scientist who wrote the first computer cantata, and Morton Subotnik, who helped launch electronic music in San Francisco a decade ago. With David Rosenboom, newer talents include Pula, the New Haven group that creates electronic environments, and Kenneth Gaburo of La Jolla, Calif., whose New Music Choral Ensemble works with vocal sounds and gestures.

But that's only for starters. Armed with grants from the New York State Council on the Arts and the American Foundation on Automation and Employment, Miss Lathem aims at a five-year program to show everyone in the field. "I'd like to give geographical recognition to an underground subculture that hasn't really surfaced yet—young people, old people, the left wing, the right. That is, if I can get them all back from India."



# ZONE

ZONE is a new media theatre production company directed by Harris Barron, Alan Finneran, and Ros Barron. The sense that life is mystery, forever elusive to the exclusively rational, is the impetus to a celebration of events of visual emotional content which have the very particularized order of dreams and the subjective clarity of madness.

In the super-life of contemporary reality, intensity is frequently chaos. To define an intensity of meaning involves a presentation of highly specific images in various synchronized simultaneities. The live action, multiple film and slide images, cabalistic sound, and electronic sets combine in a kinetic ritual tableau to provide more than sensory involvement. The images are thematically developed so that the 'rite of enactment' fulfills the 'idea' as a unified mythic event.

## INTERMEDIA AT AUTOMATION HOUSE

49 East 68 Street, New York.  
Tuesday October 13, 1970 at 9 PM.  
For Reservations: 628-1010



ZONE: Theater of New Media is directed by  
Harris Barron, Allen Finneran, Ross Barron

Tuesday, October 13, 1970 at 9:00 p.m.

"Still Life".....First Floor

Marsha Blank  
Jerry Puciato

"Silver Seconds".....Second Floor

Marsha Blank  
Jerry Puciato  
Paul Agid  
Bruce Prowten  
Hillman Barney

"Space Strides".....Third Floor

Laura Kuth  
Marsha Blank  
Jerry Puciato

".....Third Floor

Mary O'Connor  
Jan Houston  
Bill Lehne

Stage Manager.....Hillman Barney

Technical Control.....Jim Horn

Media Production.....Bruce Prowten

Costumes.....Lee Nason

Electronic Consultants.....Mike Wolf

Scott Bradner

Electronic Music

from a score by.....Gerald Shapiro

Intermedia Institute has been established through the generous support of the New York State Council on the Arts and the American Foundation on Automation and Employment, Inc.

Following this performance, ZONE will tour nearly a dozen New York State Colleges in a Residency Program arranged by the State University of New York Committee on the Arts and supported by the New York State Council on the Arts and The National Endowment for the Arts. ZONE: ON TOUR acknowledges the co-operation and assistance of the Massachusetts College of Art, Boston.

Harris Barron has worked primarily with laminated silver-sculpture and silver object-environments, has had numerous exhibitions here and abroad, and has been commissioned to execute large-scale sculpture for many public buildings. He is a 1968 recipient of the Blanche E. Colman Award, and a 1968 Design Award, U.S. Department of Housing and Urban Design. In 1969 he began the development of a new theatre program, 'Studio for Interrelated Media' at The Massachusetts College of Art, Boston.

Alan Finneran, formerly a painter, has a master of fine arts degree from the University of Michigan. Over the last few years he has evolved a very personal style as a filmmaker, and has produced several films which have been included in numerous film festivals.

Ros Barron is a well known painter who, with the aid of Radcliffe Institute Grants from 1966-68, has applied her unique imagery to techniques of light polarization in the form of 'peep show' light machines, and more recently in film and stage sets.

DAVID BEHRMAN / ANTHONY BRAXTON / GORDON MUMMA / ROBERT WATTS

Communication in a Noisy Environment

Automation House

19 and 20 November 1970

Communication in a Noisy Environment is a musical and social ensemble in several spaces, communicating by electronic interlinks.

Each space contains at least one live performer, in ensemble with his fellow performers by means of electronic audio and video.

The audience is at liberty to move from space to space during the performance.

The form of Communication in a Noisy Environment is open, similar to that of modern jazz, though the idiom extends into the realms of the supernatural, stellar, and surreal.

The "noise" of the environment is both visual and aural, extending from silence to ambience to distraction to pollution to camouflage.

In the words of Anthony Braxton, we want to have "...music that is socially usable, and from which there can be direct results. I dig watching shoe-makers, watchmakers, and ceramicists work. I wish my art could be as useful as theirs--I wish somebody could put tea or coffee in my music, or put their feet in it...".

The performance occurs simultaneously on the FIRST, SECOND, and THIRD floors of Automation House.

On each floor the activities of the other floors are visible by television and audible by loudspeakers.

The audience is free to move from floor to floor during the performance, using the stairway in the center of the building.

5/  
INTERMEDIA INSTITUTE AT AUTOMATION HOUSE  
49 EAST 50  
MAY 1971  
00021  
628-1010

HAIS LATHAM, DIRECTOR  
LUCY MANN, ADMINISTRATOR  
GORDON MUMMA, TECHNICAL DIRECTOR

DAVID BEHRMAN / ANTHONY BRAXTON / GORDON MUMMA / ROBERT WATTS

Communication in a Noisy Environment

Composer David Behrman was born in 1936. A graduate of Harvard, he has performed around the world with the Sonic Arts Union, Frederic Rzewski, David Tudor, John Cage, and others. Working with C.B.S. for several years, Behrman produced a remarkable series of contemporary music recordings. His activities as a composer include the design of electronic circuits for his own music.

The composer and jazz saxophonist Anthony Braxton was born in 1945. Until his recent arrival in New York City, Braxton was an active performer with musical ensembles in Chicago, and in Seoul, Korea. He is a member of the Association for the Advancement of Creative Musicians, and has made recordings of his own work with Leroy Jenkins, Leo Smith, and Richard Abrams. He also performs with Steve McCall, Ornette Coleman, and Chick Corea.

Gordon Mumma was born in 1935, and was co-founder of the ONCE Group and the Cooperative Studio for Electronic Music. He is a composer and performing musician with Merce Cunningham Dance Co. and the Sonic Arts Union. During 1969-1970 he was Visiting Lecturer in Music at the University of Illinois. His activities as a composer have long been directed to the use of electronic technology. Most recently, Mumma designed the Sound Modifier Console for the Pepsi-Cola Pavilion at Expo 70 in Osaka, Japan.

Artist Robert Watts was born in 1923 and lived for a short time in Burlington, Iowa. In his own words, "born in 1938, Goldfield, Nevada". Watts was raised in Bonaparte, Iowa, across the Des Moines River from Napoleon (which was washed away in the flood of 1903, population 678 according to the porcelain sign on the bridge). Watts' first performance experience was as the mascot of the Bonaparte Booster Band, in front of his uncle, the bass drummer. He later travelled as a carnival dice game shill with his grandfather, Marshall "Marsh" Smith, who died at 94 dealing cards in a Louisville pool hall. Watts made the premiere trip of the Denver Zepher with his father ( a railroad buff ), and now lives near Easton, Pa., very similiar to Burlington, Iowa.

# Who Makes Music and Where

## METROPOLITAN OPERA

MONDAY, 8 P.M. *Aida*. Arroyo, Dells, Kelli, Tucker, MacNeil, Plesello, Plishka, McWhorter. Conductor, Cleva.

TUESDAY, 8 P.M. *Tosca*. Crespin, Domingo, Celant, Plishka, Searro, Franke, Christopher, Dobriansky, Kalfayen. Conductor, Molinari-Pradelli.

WEDNESDAY, 8 P.M. *Un Ballo in Maschera*. Caballe, Grist, Rankin, Bergond, Merrill, Gibbs, Plishka, Dobriansky, Franke, Carrelli. Conductor, Molinari-Pradelli.

THURSDAY, 8 P.M. *Madama Butterfly*. Pillou, von Stade, Myhal, Nagliu, Serani, Schmor, Boucher, Dobriansky, Kuestner. Conductor, Molinari-Pradelli.

FRIDAY, 8 P.M. *Aida*. Same cast as Monday except Karlrud instead of Plishka.

SATURDAY, 2 P.M. *Don Pasquale*. Peters, Corena, Kraus, Guarera, Carrelli. Conductor, Franci.

SATURDAY, 7 P.M. *Parsifal*. Ludwig, Godfrey, Di Franco, Myhal, Robinson, von Stade, Pierce, Clements, Casal, Love, Brilioth, Siepl, Stewart, Flagello, Macurdy, MacWhorter, Goodloe, Goeke, Schmor. Conductor, Ludwig.

## NEW YORK CITY OPERA

### STATE THEATER

TODAY, 1:15 P.M. *The Makropoulos Affair*. Niska, Blanchard, Anthony, Stamford, Lankston, Pierson, Clatworthy, Smith.



Lawrence Fried

Composer Gordon Mumma performs in "Communication in a Noisy Environment," at Automation House, 49 E. 68 St., Friday.

Glaze, Castel. Conductor, Olvos.

TODAY, 7:15 P.M. *Rigoletto*. Lebrun, Lueders, Winburn, Sauler, Kiefer, Barr, DiGiuseppe, Quilico, Roy, Devlin, Bittner, Fitch, Ledbetter. Conductor, Wilson.

## CONCERTS TODAY

WORKMEN'S CIRCLE ANNIVERSARY CONCERT, Hunter College Auditorium, 2 P.M. Diana Halprin, violin, Sidor Belarsky, folk singer, mandolin orchestra and choral groups.

SOUL ROCK FROM THE ROCK, Museum of the City of New York, 2 P.M. Free.

AMERICAN SYMPHONY ORCHESTRA, Philharmonic Hall, 2:30 P.M. Leopold Stokowski, conductor, Jascha Silberstein, cello, American Symphony Chorus.

Largo and Allegro ..... Cowell  
Symphony No. 4 ..... Ives  
Cello Concerto ..... Popper  
Also sprach Zarathustra ..... Strauss

ANTRANIG SONG AND DANCE ENSEMBLE, Carnegie Hall, 2:30 P.M.

MARGARET HARRIS, piano, Town Hall, 2:30 P.M.

Air and Variations ..... Handel  
Sonata In C (Waldstein) ..... Beethoven  
Harmonies du Soir ..... Liszt  
Scherzo In D minor ..... Chopin  
La Puerta del Vino ..... Debussy  
Ostinato ..... Bartok  
Collage One ..... M. Harris  
METROPOLITAN OPERA ASSOCIATION pre-

## STUDY OF NOISE TAKES ART FORM

Automation House Presents  
Ensemble of 'Happenings'

By RAYMOND ERICSON

A television newscast on Friday night showed an "environmental laboratory" for studying the effects of aural and visual pollution on New York's inhabitants. The announcer said that some looked on it as a fun fair, others as a nightmare.

This writer had scarcely finished watching it when he had to enter environmental reality—rain, puddled gutters, honking cars, neon signs, blinding headlights—to get to Automation House for a performance of "Communication in a Noisy Environment," an environmental art form. Laboratory, reality and art form seemed unpleasantly identical.

Automation House is a handsome converted town house on East 68th Street, which was opened this fall for the use of various organizations. It initiated a series of "Intermedia" last month. Friday night's was the second event, conceived by Gordon Mumma, with the assistance of David Behrman, Anthony Braxton, Robert Watts and Leroy Jenkins.

### Monster of a Citroën

It was an ensemble of happenings on three floors, with television screens and loudspeakers to relay what was taking place on the different levels. There were two nice things: on the first floor, a trim red jeep-like Mehari Citroën; on the second level, a floor strewn with dry leaves, brush and logs, which still had a woodsy smell. The Citroën in time became a monster, with its motor racing, horns blaring, neon-tubed windshield wipers swishing back and forth.

Mr. Mumma and his colleagues played amplified instruments—violins, clarinets, saxophones; a toy zither, xylophone, police whistle, cow bell; a French horn—but never in the conventional musical style. Images flashed on the walls—maps, words, abstract paintings, seascapes, anything. Two hundred targets from the National Rifle Association lined the walls of the third floor. On other available spaces were lifesize woodchuck, crow and police-training targets from the Stoeger Arms Corporation, pictures of a moose, a wild boar, a mountain-climbing goat. No rifles or other arms anywhere.

THE NEW YORK TIMES, SUNDAY, NOVEMBER 22, 1970

The planned chaos of image and sound was gradually raised to a level at which communication was impossible. The air was further polluted with the smokelike spray from a fire extinguisher. This may or may not have been the point of the performance. If not, an unintentional moral could be inferred. And so back to the office environment, almost deserted, where the muted clacking of a few typewriters sounded like real music.

# INTERMEDIA AT AUTOMATION HOUSE

## Announcement:

The first New York performance of "Ecology of the Skin", an electroencephalographic experience for performer/leader and group-dynamic brain-waves, an audience participation work by David Rosenboom.

The demonstration of the new computer instrument for brain-wave music will be held at Automation House on Thursday, December 3, at 4:30 p.m., for the press and for industry.

Performances on Friday evening, December 4, from 6 p.m. to 11 p.m. will be held continuously. At regularly scheduled intervals, a documentary film and an audio-visual explanation will be given of the principles encompassed in this work; bio-feedback, electroencephalography (brain-waves), etc. designed to give familiarity with the materials. Other works by composer Rosenboom will be performed before the audience enters the chamber, which consists of a small inflatable theater.

David Rosenboom was born in Iowa in 1947, and grew up in Quincy, Illinois. He attended the University of Illinois where he worked with Lejaren Hiller and Salvatore Martirano. He is a composer, performer (violin, viola, piano, percussion, and trumpet), conductor and physics-researcher. During the past year, he founded Neurona Company, which developed the portable computer synthesis systems for various media, now incorporated into the ARP Synthesizer manufactured by Tonus, Inc. Rosenboom was Artistic Co-Ordinator of the ELECTRIC EAR series at the Electric Circus, and was a Creative Associate at the Center for Creative Arts in Buffalo. He was an advisor for the New York State Council on the Arts, a performer on several record labels, and is presently visiting professor of electronic music at York University, Toronto.

Tickets for these events must be requested in advance for the following sessions: Friday, December 4 at 6 p.m., 7 p.m., 8 p.m., 9 p.m., and 10 p.m. Please phone Lucy Mann at 628-1010 for reservations.

THE NEW YORK TIMES, WEDNESDAY, NOVEMBER 25, 1970

# Music Draws Strains Direct From Brains

By DONAL HENAHAN

Are you ready for brain-wave music? David Rosenboom is. If he had his way, he would wire us all up, plug us in and groove on the music of our minds. When Mr. Rosenboom, a 23-year-old composer, who will present a sample of his work Dec. 4 at Automation House, hit on his plan for investigating the relationship of musical waves to encephalographic waves, he recalls that he over-responded. "My first reaction," he said in an interview the other day at Automation House, "was: 'Wow! I'll plug into the head and out will come Mozart.' But then I began to think and I realized that really wouldn't be much different from playing Mozart on the piano."

Mr. Rosenboom understands that most people would find his experiments outlandish. "But I regard music as an information energy system, and the human being as an input-output device," he said. "The brain is a computer—a digital-analog pattern recognizer."

## Invented the Neurona

Actually, the concept of using brain waves to make music is not new with Mr. Rosenboom. Charles Ives proposed it early in this century, and a number of contemporary American and European composers have played with the idea. But Mr. Rosenboom is not the least worried about originality, he says. A tall man with a scraggly mustache and gently amused eyes, he dropped out of the University of Illinois in 1967, invented his own music synthesizer, the Neurona, sold it to a larger concern, and now heads an interdisciplinary program in the arts at York University in Toronto.

At York University, whose faculty he joined this fall, Mr. Rosenboom has been working with students in groups of three at a time, testing his theory that people can control the type of brain waves they emit, and hence their psychophysical states, or moods. "I connect electrodes to the skin of their heads, and feed the impulses that they emit into a computer—one I designed and made," he said. "It analyzes the waves digitally. We find that people can learn to recall their psychophysical states and lock in on them. The output goes into a loudspeaker that plays a certain

tone whenever he moves into an Alpha wave state, for instance. He learns to sustain the tone, to control the output and his energy state."

As the students, according to Mr. Rosenboom, become experienced, they are able to move at will from one wave type to another. The basic waves, he said, are Alpha, a mid-frequency type emitted by everyone; Beta, a high-frequency wave, and Theta, a low-frequency wave.

## Applies Theory to Art

"Scientists have been working at this kind of bio-feedback brain-wave—Dr. Neal Miller at Rockefeller University, Dr. E. E. Coons at New York University and Dr. Lester Fehmi at Stony Brook," he said. "By intercranial stimulation rats have been taught to control heart-beat rates and blood pressures."

How might this research relate to music? Mr. Rosenboom is glad you asked that question. At York University he is in charge of an intermedia program that applies systems theory to art. "We know that any basic information can be translated into any medium," he said. "That's easy. So now we need to investigate art with an abstract systems approach." Since any energy source can be transformed into sounds, Mr. Rosenboom went on, why not discover how to control the emission of brain waves and make them into music?

The young composer has composed avant-garde pieces such as "Then We Wound Through an Aura of Golden Yellow Gauze," which was played two seasons ago in New York by Lukas Foss's experimental music group from Buffalo, and "To That Predestined Dancing Place," a multimedia ballet. But he thinks his ego-music phase is over. "I don't want to write any more 'pieces,' to hang my name on," he said. "No more So-and-So's Symphony No. 9. It's not valid anymore to put your name on a piece. There is too much egocentric art in the West. I'm not putting down the Beethoven kind of concentration on originality but it comes to represent the artist's ego. In India, a painter will sometimes paint the same picture all his life. In old Japan, copying other art was considered a duty, not plagiarism."

Far from wanting to put his name on any new pieces ("It would be certainly pretentious to call these brain-wave sound pieces my music"), Mr. Rosenboom would like to submerge, to develop his sensitivity to other people's brain waves and put whole groups into contact with each other's psychophysical states. "It could reach the point where a group could almost hold conversations without talking," he said. The idea, he admitted, "could be related to dis-

ciplines such as Zen or yoga, but might be a faster way to get there."

The attempt to discover "a mediational language, a coherent energy" flowing through a group is not only possible, but exists already, Mr. Rosenboom pointed out. Jazz groups seem to achieve something like it, and great musical performers of many types seem able to control the brain-wave states of themselves and their audiences.

For his demonstration on Dec. 4, part of the "Intermedia at Automation House" series, Mr. Rosenboom will not be aiming at any such metaphysical experience, but he does hope to show how brain-wave music might work, by wiring up several groups of about 10 persons each, on different floors of the house, and recording their success in controlling the tones.

Whether Mr. Rosenboom's theories lead to anything, he is a talent to keep track of, if only because he once composed a piece named "How Much Better If Plymouth Rock Had Landed on the Pilgrims."

"The piece is 72 hours long," Mr. Rosenboom said. "So far, the longest performance it has had was 18 hours—in a loft in New York." Even Beethoven never dared put his name to anything that long.



David Rosenboom and some of the equipment with which he produces his music.

Ecology of the Skin

December 3 and 4

Children often play at what perplexes or threatens them--at features of their environment which they need to understand, master, or otherwise bring themselves into balance with. Art for the adult serves a similar function. It is man's make-believe way of practicing to engage himself with what is salient yet unfamiliar, unexplained, or uncontrolled in his grown-up world. For example, if one wonders and complains that youth should like its rock music so loud, it may be that they are only trying to make artistically meaningful the deafening screeches stoically tolerated daily on the subways by their elders.

Since much that is unfamiliar, unexplained, or uncontrolled today is the result of the rapid and complex changes wrought by science and technology, it is understandable why the concerns of art should now often be with science and technology itself. The concerns of the composer David Rosenboom's art are with that particular branch of science and technology presently opening up to us the astounding ability to consciously experience and bring under self-control many of the hitherto unconscious neural process on which mental life is founded.

Neurophysiologists and physiological psychologists discovered many years ago that the brain in the course of carrying out its functions generates currents over its surface that pulsate from a few to many times a second. The frequency and amplitude of these pulsations can be detected via sensitive recording electrodes attached to the scalp. Recently, it has become possible to signal to a human when his brain is producing a certain frequency of pulses by letting this frequency electronically turn on a tone or some other stimulus that can be perceived externally. This technique by which a person can listen to his own internal processes is termed bio-feedback. It has been used to allow an individual not only to keep track of what frequencies his brain is emitting but also to follow the levels and changes in such things as heart rate, blood pressure, and gastric motility.

By use of bio-feedback it is now possible to test whether a person can learn consciously to control these ordinarily unconscious internal processes. The experiments of Kamiya, Fehmi, Miller and others are showing that such control can indeed be achieved. In addition, as one learns to sustain the frequencies of his brain for long intervals in the 8-14 pulses-per-second range (termed "Alpha"), mood changes and altered states of consciousness are experienced that resemble those attained by Yogis and Zen Masters and other experts of the contemplative state.

David Rosenboom's Ecology of the Skin represents a play at bringing man into some adjustment with this vast new inner realm of experience being pioneered within the skin. The play proceeds: a) as a game with oneself to learn a control whose rules must be discovered in the subjectivity of one's mind; b) as an exercise in manipulating lights, pitches, rhythms, etc. in the giddy spirit of "Look Ma! No hands!"; and c) as a seeking out for what altered states and rewards that self-control may bring. It is a play open to those that wish to join; it is music to those who wish to muse.



The Composer: David Rosenboom was born in Iowa in 1947, and grew up in Quincy, Illinois. He attended the University of Illinois where he worked with Lejaren Hiller and Salvatore Martirano. He is a composer, performer (violin, viola, piano, percussion, and trumpet), conductor and physics-researcher. During the past year, he founded Neurona Company, which developed the portable computer synthesis systems for various media, now incorporated into the ARP Synthesizer manufactured by Tonus, Inc. Rosenboom was Artistic Co-Ordinator of the ELECTRIC EAR series at the Electric Circus, and was a Creative Associate at the Center for Creative Arts in Buffalo. He was an advisor for the New York State Council on the Arts, a performer on several record labels, and is presently visiting professor of electronic music at York University, Toronto.

The Performers: Stewart Smith and Gary Wolf are student members of the York University Intermedia Group from the Program in Music.

Sources of Inspiration: Edgar Coons majored in music at Colorado College and Yale but obtained his Ph.D. in psychology under Neal E. Miller at Yale. Now an Associate Professor of Physiological Psychology at New York University, he does research in electrical stimulation of the brain and behaviorally studies how messages are transmitted through the nervous system. As an avocation, he enjoys acting as a catalyst in uniting art and science. He introduced David Rosenboom to the musical possibilities of bio-feedback although he conducts no research in that area himself. He is on the board of New York Pro Musica and has functioned as consulting psychologist to the Electric Circus.

Lester Fehmi is a professor physiological psychology at the State University of New York at Stonybrook. He studied with Donald Lindzey and Theodore Bullock at UCLA. There he became interested in recording the electrical activity of the brain and using it in combination with bio-feedback to study the neural correlates of altered states of consciousness. David Rosenboom got his initial training in brain bio-feedback in Fehmi's laboratory. Some of the equipment demonstrated will be Lester Fehmi's.

Demonstrations and Show Equipment: Equipment demonstrating bio-feedback from heartrate is provided and manned by David VanDercaar, a postdoctoral researcher in the laboratory of Neal E. Miller at Rockefeller University. The film, "Involuntary Control" has been by courtesy of Philip Mendlow and Jerry Murphy, producer-directors. Collaborating in the production of the film was Professor Richard Koppenaal of New York University. Thanks is expressed to Mrs. Manning of Scarborough General Hospital, Toronto, for use of test apparatus. The ARP Synthesizer is supplied by Tonus and the speakers are provided by Temple Sound.

INVOLUNTARY ? CONTROL

16mm; 20 min., prints by Technicolor

script: Jerry Murphy  
Dr. Richard Koppenaal  
Philip Mendlow

producer: Philip Mendlow

a film by Jerry Murphy

\*\*\*\*\*

The development and production of this survey was designed to introduce to classroom and other audiences the recent innovations in psychology considered to be revolutionary by experts in the field.

The film is basically an extension of the concepts and techniques outlined by Dr. Neal Miller in his article in Science magazine, 31 January 1969.

The work on alpha training, related to Miller's work although he is not directly involved, has aroused great interest in audiences, especially students. The work has been given widespread attention: recently, by Life, in an article in August of this year, and by Look, 6 October 1970, in an article entitled "Brainwaves: The Wave of the Future." In addition, Mr. David Rosenboom, whose alpha training is treated in the film, was the subject of a recent article in the New York Times.

The rat experiment we have shown is an essential replication of the pioneering Miller and DiCara heart rate experiment. The performance of the rat has been idealized to provide a clear demonstration, and student test audiences have responded very favorably to this illustration.

In the interview with Dr. Miller we have allowed him to voice his reservations about some of the wild speculation regarding his work. It was our purpose to compose a chronicle of the first stages of the scientific study of the control of involuntary functions, and therefore to avoid speculation.

Most of the professional literature in this field is very recent - most within the past two years. Furthermore, the work has not yet begun to appear in psychology textbooks.

Any further information on INVOLUNTARY ? CONTROL may be obtained from:

Mr. Jerry Murphy  
306 West 75th Street  
New York, New York 10023  
(212)TR4-4176

BARNARD LAW COLLIER  
WASHINGTON, D. C.

7 December 1970

Dr. Edgar E. Coons  
c/o New York University  
Room 1053 E Brown Bldg.  
New York City, N. Y. 10003

Dear Dr. Coons:

I very much appreciated your comments and explanations the other night at Automation House, and your clear language and sure footedness round the brain cells helped me make some sense in the piece for the Washington Post.

As I mentioned to you, I am now expanding my interest for a Saturday Review article. It is due reasonably soon, and I have a great deal to learn. I would be much obliged if you'd help.

I am planning to be in New York within the next week to ten days. Of course I would like to talk with you at length. In the meanwhile, if you find any time, I would much appreciate a note from you on any material you feel I ought to read, some people I ought to talk to, and any ideas I ought to pursue both for Saturday Review and for a projected book on the subject of the brain explorations going on.

Again, thank you, and I hope to hear from you,

With best regard,

  
Barnard Law Collier

BLC  
No. 10 7th Street, N. E.  
Washington, D. C. 20002

# STYLE

## A Composition for Cranium and Computer

By **Barnard L. Collier**

NEW YORK—The techniques are still very primitive, but David Rosenboom, a 23-year-old classically trained musician, conductor and physicist, has demonstrated to a hundred or so spellbound listeners at the National Academy of Sciences last night that we can now play music with our brain.

No, you cannot plug into your head and think a symphony. Not even "Mary Had a Little Lamb." The idea of brain music is not new; composer Charles Ives specu-

**Automation and Employment, set up by well-known labor mediator Theodore Kheel to help Americans get over their fear of the automated future.**

The lights are dim. A painting hangs on one long wall. Half-a-dozen abstract end of the room is Rosenboom's gear: a Vox portable organ like the rock group's use; and ARP synthesizer, a computer advanced analogue of tronic musicians and specially modified by Rosen.

boom; a second computer programmed to analyze brain waves; several transistorized brain-wave amplifiers in plastic boxes about the size of a television set; an oscilloscope to visually display the brain waves; a portable television camera focused on the oscilloscope screen to broadcast the brain wave images to large television receivers placed round the room; several big speakers in the corners. NO SMOKING signs prominently displayed.

David Rosenboom is a tall, slender man with a ragged little moustache, French-

style wraparound eyeglasses, an affection for loose-fitting flowered shirts. He speaks with precision and a calm kind intensity. He plays, aside from his piano, the violin, viola, pet. He has composed avant-garde works of music including a collection of pieces entitled "How Much Better If Plymouth Rock Had Landed On The Pill-grims," which is 72 hours long. HMB:PRHOLCTP was played in an 18-hour session in a Canal Street loft once and the other three-quarters.

See **BRAIN**, C3, Col. 1

People / The Arts / Classified

# 'INTO THE ECHOING CHAMBER OF YOUR SKULL'



Photos by Maggie Castellan

*David Rosenboom with the equipment necessary for transforming brain waves into sound.*

## BRAIN, From C1

awaits performance. Rosenboom is a visiting professor of electronic music at York University in Toronto.

The idea for brain music zapped into Rosenboom's head a year ago when he was told by his friend, Dr. Edgar E. (Ted) Coons, a professor of physiological psychology at New York Uni-

versity, about the work of 36-year-old colleague, Dr. Lester Fehmi at the University of New York at Stonybrook. In Les Fehmi's laboratory, nearly 200 people had by then been hooked up to an electroencephalograph (EEG) and a computer. Some of the subjects had actually been trained to alter their brain wave patterns at will.

The new knowledge that humans could actually alter basic brain wave patterns on cue — or at will — astounded Rosenboom, who could hardly wait to try it himself. It took him just 30 minutes to get very good at it with minimal coaching from Dr. Fehmi.

The human brain produces billions of electrical pulses in the course of its

# Composition for Cranium and Computer:

daily job of running the body and thinking thoughts. These charges radiate out in waves to the skin of the scalp, where they can be detected by an EEG like an electro-cardiograph records heart action and other devices monitor biological functions like temperature, respiration, blood pressure and the like. The brain produces four types of waves that are now classified: alpha, beta, theta and delta. Each makes its peculiar kind of squiggle on EEG graph paper, or on an oscilloscope screen.

The delta waves — slow, rolling, low in frequency — come at four cycles per second and below. Zero is death. Delta waves are associated with the objective state of deep sleep. Theta waves, from five to eight cycles per second, are associated with stillness, reverie, wakeful dreaminess.

Alpha waves, from eight to 13 cycles per second, are associated with a relaxed, sensitive, intensely creative objective state such as artists, musicians and athletes say they experience when they are performing at their peak. Beta waves, from 13 cycles on up to 200 and above, are associated with our usual rather unfocused activity, with some forms of abstract and critical thinking — and on the upper end of the scale with severe anxiety and mental disorder.

What Dr. Fehmi and a small group of other scientists around the country have found out is that you can be trained like Pavlov's dogs to produce alpha waves in your brain. And with alpha production comes what Dr. Fehmi describes as the feeling of tranquil "into-it-ness" that meditators, yoga practitioners and Zen masters know.

The method is called bio-feedback training. It works by sending the wave impulses your brain makes through an amplifier and into a computer, which measures the percentage of time per minute you are producing alpha waves in the various parts of your brain.

With each decent-sized burst of alpha your brain gives off, a red light blinks on, or a tone is emitted, to tell you that you are succeeding in generating alpha. Success is your re-

ward, and wanting more success you will concentrate on achieving the frame of mind that results in more alpha waves—and onward and upward to as close to 100 per cent alpha production as you can get.

The groovy world of the alpha wave maker has gotten a lot of publicity recently, in *Life*, *Look* and (for the best article to date according to Drs. Fehmi and Coons, and Rosenboom), *Glamour*. Out on the coast a small company is marketing a gadget it claims will beep when you are producing good brain waves—but according to Dr. Fehmi, it does not really discriminate between one brain wave and another. There are also budding con artists who are claiming to teach you to make alpha waves for \$175 for a semester of lessons. "I'm afraid," Dr. Fehmi said, "that the fakes and the damned faddists are going to cause a lot of trouble soon."

The crowd at Automation House, from the Bellbottomed, bearded hip to the old straight, had an accurate feeling that David Rosenboom's premiere performance was not going to blow their minds musically speaking. There were electronic bugs in the little brain-wave amplifiers; the ARP's components went berserk for a while and then a few of them slowly died. There was too much random radiation from household current in the room and it fuzzed up the brain wave patterns on the oscilloscope.

But most of the audience had an excellent idea that they were seeing, as Dr. Fehmi put it, "incredible, new-frontier stuff."

Rosenboom had planned to wire up several dozen participants and use their collective brain waves as what he called an "energy source" to provide changing patterns of sound through the ARP. For example, if five people could produce acceptable musical sounds by changing their brain wave patterns, Rosenboom would try to induce other players to do the same. The result could be heard at the very start of his performance when he used the ARP (which was all working) to produce variations on a sin-

## Brain-Wave Music.



David Rosenboom wires David Behrman, an electronic musician in New York—for brain-wave music.

gle musical interval, a chord of octave and a fifth.

What came out was what you might imagine hearing if you were walking around in the echoing chamber of your skull.

Rosenboom and Dr. Fehmi wired me up for a try at making brain music. The procedure is that two silver electrodes are taped to the top and back of your skull, and a third is clipped to your ear. The lead wires are plugged into the portable

brain wave amplifier and wires from it are patched into the ARP. Rosenboom can work the ARP and his other computer so that every time you generate a snippet of alpha you change the harmonics of a tone he assigns to you. Each "brain player" has his own tone.

The more alpha a player generates the more his tone warbles, pulses and resonates. At first, you make the same kind of uncontrolled noises you might make too-

ting around with a saxophone for the first time. With practice and discipline, however, a player can modulate, turn off and turn on his alpha wave output in a controlled way. If anyone can get full control, and can learn to be agile enough with his brain waves to shift from, say, beta to delta and back to theta with a pause at alpha, he will be well on the way toward brain melodies, if that's where he wants to go.

# Bob HUNTER

If electronic symphonies, the sounds of whales singing or computer "interfaced" sounds of waves and birds can produce biochemical and psychological changes in people, how long will it be before pot is obsolete?



The reasons for the psychedelic revolution are as complex as they are misunderstood. Mainly, our children have grown up in a "synes-

thetic" environment. That's quite different from a merely synthetic environment. Synesthesia is a state wherein our senses and imagination are more or less united. Poets and writers like Blake and Yeats and D. H. Lawrence longed to achieve such a state.

Television did the trick. As McLuhan puts it, TV "enveloped Western man in a daily session of synesthesia." Kids learn to "trip out" — that is go off on mental flights — from the time they were plunked down in front of the tube while mommy got on with the housework.

Along comes something like marijuana and the kids take to it almost casually. It becomes just another way of achieving the synesthetic state with which they already feel so much "at home."

Okay — suppose another "way" came along.

And it is coming along, courtesy of the relentless drive of technology. Those stereo albums already mentioned form the basis for an evolution in precisely this direction. The electronically-induced "high" is no more natural than the chemical high, but it would seem to involve fewer risks.

★  
PERHAPS THE MOST spectacular step in this direction was taken recently in New York by David Rosenboom, a 23-year-old musician who has found a rough way of achieving this. The techniques are clumsy, but the basic idea is clear enough.

Using an Arp synthesizer (an advanced analog computer designed for electronic music), a Vox portable organ, several transistorized brain-wave amplifiers, an oscilloscope to visually display the waves and various other bits of equipment, Rosenboom managed to demonstrate the way in which one can alter one's own brain waves.

The discovery that this could be done was made by another man, Lester Fehmi of the University of New York. By hooking people into an electroencephalograph and a computer, he found he could train them to recognize their own brain wave patterns and change them.

Rosenboom took the discovery one step further. He conceived of the idea of "brain music." Why not learn to modulate your brain waves in such a way that they could

produce recognizable music once the waves themselves had been passed through an amplifier and computer? In this case, these electronic devices become highly sophisticated "musical instruments."

The brain produces four types of waves — or at least four that have been classified. These are alpha, beta, theta and delta waves. The delta waves are low frequency, generally produced in deep sleep. Theta waves, operating at a higher frequency, produce stillness, or reverie or "wakeful dreaminess." They're "Trippier" than the deltas.

Alpha waves are associated with sensitive, intensely creative mental states — such as artists get into when they're at their peak.

★  
BETA WAVES ARE the furthest-out, apparently having to do with abstract thinking, intuition, and in some cases getting into those mysterious psychic regions out of which flow both genius and insanity.

By plugging in via Rosenboom's collection of electronic gadgets — it's called "biofeedback training" — individuals can be taught to shift from, say, a state in which beta waves are dominating, to an alpha state.

Incidentally, they can learn to control the flow and duration of brain waves enough to create music. A pulsating alpha note, followed by a slower, rolling delta sound, throwing in a few quick thetas or betas.

More to the point, however, is the evidence which suggests that by this means one can learn to shift from a tranquil state of consciousness right into an intensively creative state.

Or vice versa. Or, presumably, one may find a way to penetrate the more mysterious regions of the mind.

Now, that is mind-altering.

And — important, this — the fact is that Rosenboom's amplifiers and analog computers are not being put to work in a vacuum. Bioelectronics is a full-fledged field of study. Research, under a hundred different guises, is proceeding along these lines. How far are we from electronically-engineered states of *satori*? Perhaps only a few years.

We can be sure that once these techniques are refined and devices are made available at a low enough price, hundreds of thousands, probably millions, of young people will begin experimenting with them. We will be into the post-psychedelic period.



# new time

## THE SOUND OF MIND

by Carman Moore

Deal with this awhile: "Where does the West end?" and "Where does the East end?" And don't say "at Fifth Avenue" and think you're heavy.

Western civilization, a concept which in 19th century western civilization coded out as white. Christian, polite, right, and out-asight, has in the 20th century come under a cross fire—one light but growing volley from within and another heavy one from without. The concept of western civilization is now beginning to read as up-tight, anti-Christ, impolite, and quick-to-fight. To be fair, both assessments are off-center. The major failing of Euro-America has also been its major world value—it has been too adept at making tools for a future (though increasingly slow to use them). Over-involvement with future implies hoarding (salting away righteousness for heaven; salting away loot for old age; grabbing land for glory; Christmas accounts, insurance, etc., forever); power then follows stockpiling, brings on arrogance, and corrupts to the point of strangulation. With Future as a god, self examination and the treasuring of then and now simply do not occur—until strangulation time, which is now, 20th century.

In the course of traces kicked over, a natural artistic concept dating back to the cave man was lost. That concept is the concept of unity. The west has taught us through "Alley-Oop" and junior high social studies that prehistoric man and his cultures were inept, brutal, and foolish, but how much more so than our 1970

showpiece? We are back to so-called "primitive" artistic expression; we see the media moving from literate (that still means high-class to you, doesn't it?) to audio-visual; we hear performing artists boast of mixing media; and everywhere animal skins are worn and the body exalted. With prehistoric man, early attempts at spoken language, music as both song and necessary communication, the sound of footfall, dancing, and magic to control nature must have melted together as a beautiful sense of the self being one with nature. The western drive to categorize not only separated man from life and man, man from man, but also put the components of his life out of touch with each other—e. g., poetry is not song lyric is not prose is not language . . . music is not noise is not the sound of feet running is not poetry is not song lyric, etc. forever.

With this not yet in mind center-front, I attended an extraordinary little exhibition-music session at Automation House two weeks ago featuring avant-garde composer-rock drummer-electronic wizard David Rosenboom and his sonic brainwave machine. The notion of brainwave research is not, of course, anything brand-new. Scientists have broken down the types of brain activity and the characteristic waves given off by these activity centers for their own kinds of medical-psychological amusements. Making these waves come out of a loudspeaker is also not outside man's imagination. Nor are concepts of human-to-human wordless communication nor self control of the mind anything new; many Eastern and African religions seem to pre-suppose meditative or mystic communications with peers, spirits, and departed ancestors (Christians talk only to God) and Jung has thought in somewhat this way. Rosenboom's equipment and application of brain research is arresting because it takes art back to communications through science. In a sense it attempts to weld the west and its science with the east and the concept of man in touch with man, cosmos, and himself.

Because the consarned contraption went out of kilter the night I attended, the group experiment didn't work. But what was supposed to happen centered around the output by individual brains of so-called Alpha pulses—the kind which are present when quiet concentration, day-dreaming, and sleep are at their fullest. Most people cannot control it because of up-tightness and so on, but when "Alpha" is on, Rosenboom's device emits a certain kind of pitch which presumably a trained brain could put rhythms into, sustain, or crescendo-dimenuendo. With the sensitive receptors fitted to the heads of a roomful of trained and disciplined people and all this run through the Arp Synthesizer operated by the composer, you could make chamber music, I guess, or, eventually, discuss things with your feelings—or, of course, do both at once (since I did bring the notion up a few paragraphs back).

I can't resist saying that the concept blows my mind. It sounds like something that everybody needs. At any rate, in the spirit of American competition,

let's get this brain contraption and stockpile it before the Kremlin or Agnew get on it and start shouting out orders to a world that is forced to plug in.

# *Saturday Review*

WEEK OF 1976 FEBRUARY 28-MARCH 6

## **BRAIN POWER: THE CASE FOR BIO-FEEDBACK TRAINING**

by Barnard Law Collier

## **WHAT HAPPENED AT "HARPER'S"**

by Stuart Little

## **PAPAL FALLIBILITY**

by Markus Barth

mation about visceral organs that the mind for some reason dismisses or never perceives. Dr. Fehmi's beeping tone and the mini-volt currents of pleasurable brain stimulation that lab rats get are simple reward bio-feedback signals; Dr. Engel's colored lights represent more guidance. All are examples of bio-feedback used to instrumentally condition internal organs by letting the mind know, within predetermined limits, what those organs are up to.

One path of bio-feedback research has branched slightly away from the strictly therapeutic approach and is investigating the ability of human beings to exert purposeful control over their visceral functions, especially their brain functions, with the goal of making the essentially healthy person better able to cope with his world. At the United States Navy Medical Neuropsychiatric Research Unit in San Diego, California, Dr. Ardie Lubin and Dr. David Hord, both psychologists,

are studying the relationship between the output of alpha waves and sleep. What they want to determine is whether or not a person deprived of sleep can be returned to a state of effectiveness and acceptable decision-making capacity by willing himself into an alpha state for a certain length of time. Some preliminary tests have shown that alpha states may be recuperative.

At the Langley Porter Neuropsychiatric Institute, part of the University of California Medical Center in San Francisco, a research group headed by Dr. Joe Kamiya is exploring the possibility that brain-wave control may have important effects on health, creativity, and such mental functions as perception and memory. Dr. Kamiya is regarded by most psychologists as the pioneer in the field of brain-wave control. Dr. Kamiya and his research team have found that subjects who do best at mastering their alpha-wave output are those who have had some training

in meditation, as in Zen. At Stony Brook, Dr. Fehmi has noted that musicians, athletes, and artists are especially adept at control over their brain waves. Conversely, he has found that subjects who come into his chamber and slouch in their armchair in the spaced-out way associated with drug trips produce precious little alpha.

It is frustrating to researchers that the subjects who are most proficient in gaining brain-wave control are often strangely tongue-tied when it comes to telling just how they do it. Some say they relax and wipe everything from their mind. Others concentrate on some infinite point like a mystical third eye in the middle of their forehead. Some are unable to verbalize the experience at all.

"The best way I can describe the feeling of alpha," says Dr. Fehmi, "is a relaxed but alert and sensitive 'into-it-ness.'" Dr. Edgar E. Coons, a physiological psychologist at New York University and a musician, has been trained to produce alpha waves in Dr. Fehmi's lab; he says the alpha state "makes me feel as if I'm floating about half an inch above my seat." A talented young musician named David Rosenboom, who recently presented a bio-feedback brain-wave concert at Automation House in New York (brain-wave activity was fed into a computer and an ARP synthesizer; the result was a weird but not unpleasing effect), is the reigning champion brain-wave producer for Dr. Fehmi. When his alpha is really going strong in all parts of his brain, Rosenboom says he is plugged in to a "great energy source." Another musician named LaMonte Young, who keeps a forty-cycle "home" tone going in his Manhattan studio at all times, explained that he had no trouble generating alpha the first time he ever tried it, because his mind "is tuned to frequencies and intervals."

At the University of Colorado Medical School, Dr. Hans Stoyva has had notable success in teaching his patients how to relax specific muscles that tense up and cause certain kinds of tension headaches. The easing of pain has been swift and dramatic.

Dr. Martin Orme, director of experimental psychiatry at the University of Pennsylvania Medical School in Philadelphia, is studying the alpha-wave phenomenon with an eye toward finding out what exactly an alpha state does to or for an individual and how it might be beneficial to him. "It's not enough to know you can contemplate your navel," Dr. Orme says. "You then have to ask, 'What happens?'" Experiments conducted with subjects who have been trained to produce a reliably high alpha-wave output show, accord-

(Continued on page 58)

David Rosenboom recently gave a bio-feedback brain-wave concert at Automation House in New York by feeding alpha activity into a computer and an ARP synthesizer; (below) he wires a friend for reception of his brain-wave music.



—Photos by Maggi Castelloe

PERSONALITIES, TRENDS, VIBRATIONS THAT MAKE THE

# SCENE/SCEN

BY LEO LERMAN

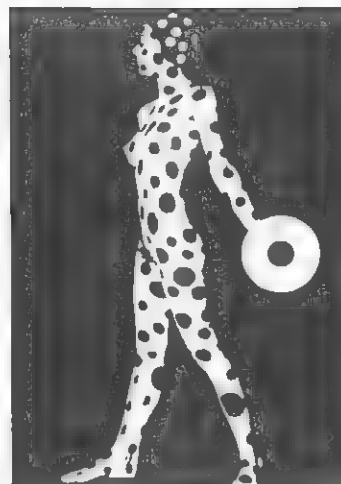
## TOUCH

the futurefuture in a brainwash jump. Scene: Intermedia Institute at Automation House, 49 East 68 Street, N.Y. 10021, or wherever the components of the I.I.A.H. year-long, 12-part series of experiments in art and technological cross-fertilization cross your path. Under the over-all direction of Thais Lathem, ex-Electric Circus concerts mover, abetted by such powerful shakers as Lucy [continued on page 143]

[continued from page 99]

Mann, Gordon Mumma. Automation House is surfacing as a key development center for the New Art. A quick scan of the I.I.A.H. year immediately clues you in to key names, ideas. Tip: note these; sooner or later, they will turn up where you can involve yourself in them—self-involvement is endemic to most of the New Art, since so much of it is intrinsically environmental and you are, after all, now an environment.

I.I.A.H. opened with Zone, Boston's 13-strong, on-tour New Media Theatre—"a kind of visual-cerebral circus." Follow-up: Gordon Mumma—collaborative, social, musical work with David Behrman, electronic composer, circuits inventor; Anthony Braxton, composer/jazz saxophonist; artist Robert Watts. Series ends in April, also includes: *Electric Stereopticon*, intermedia performance group plus U. of N. Illinois artists; Salvatore Martirano's *Let's Look at the Back of My Head for Awhile*; Gerald Shapiro's *From the Yellow Castle*—strictly audience activated, this opus; Kenneth Gaburo's *Jesture Music*, interpreted by NMCE III; Subotnik's *Sidewinder*—"action music within a total score of sound, light"; Palsa creating an electronic environment; an Oscilloscope event with Morris, Tambellini; Babbitt, major electronics man.



# VARIATIONS ON AN ELECTRIC THEME

## FM GUIDE

by HAL WICKLE

FEBRUARY 1971

**A**utomation House, behind the quiet facade of the lovely brownstone at 49 East 68th Street near Lexington Avenue, is involved in the most humanistic activities. For example, most of the important community mediation sessions occur there. The social reform groups quietly discuss their problems with some of the outstanding mediators in the business.

Headed by Theodore Kheel, the American Foundation on Automation and Employment, the umbrella organization of these kaleidoscopic events, has now given birth to perhaps one of the most exciting experimental artistic series to hit New York in recent years. Last October, the Intermedia Institute, masterminded by Mrs. Thais Lathem, overwhelmed sophisticated "culture vultures" by presenting a theater ensemble called ZONE as the first of a dozen various music/theater/dance/film presentations.

ZONE, a Boston-nurtured group, demonstrated its unique combination of human, projected and plastic movement to an over-flow crowd. The newspapers and magazines were caught in a critical dilemma. Who to send to review it? It was sculpture and painting. Should they send the art critic? It was also film. Should they send the film critic? It was also theater & dance. Should they send the theater and/or dance critics? It was also music. What about sending the music critic? Yet ZONE was all of these at once.

What the audience and the press saw was a three-part performance. Each part, "Silver Seconds," "Space Studies," and "— — —," took place on a different floor. The audience immediately became part of the intimate environment as the troupe, headed by Harris Barron, Alan Finneran and Ros Barron, with music by Gerald Shapiro, went through their apparent free-form performance.

If the audience thought the show had an aleatoric or improvisational quality, they were surely mistaken. Every detail had been carefully plotted. Visuals included a film of rhythmical plucking of a bare breast to the tune of "Row, Row your boat." Another vignette included the juxtaposing of three silvered nudes

choreographed against pulsating concentric circles of colored neon tubing and polaroid filtered light. Three other masked dancers worked black-light-responsive elastic ropes forming a cage which were then pulled and stretched rhythmically.

By their own statement, ZONE is a "13-member company of performer-technicians who combine their varied talents in the fields of painting, sculpture, electronics, dance, theater, and music to provide a kind of visual-cerebral ritual circus."

But what are they trying to do? Harris Barron calls it "Theater from an object maker's point of view... Noh plays raised to a freak-out pitch of intensity..." They would hope to have the audience "escape into a controlled interior experience."

ZONE just didn't happen out of the blue. Each of the three innovators have pursued their own separate careers. Harris is an award-winning sculptor who has worked primarily with laminated silver-sculpture and silver object environments. Alan is a painter turned filmmaker whose

work has been included in numerous film festivals. Ros, also a painter, has applied her unique imagery to techniques of light polarization.

Together the trio have been recipients of Rockefeller Artist-in-Television grants for work at Boston's highly regarded video station, WGBH-TV. Among their joint ventures are a film collaboration for NET called "America Inc." plus media theater productions of "Glide," "Water Bodies," and "The Eighth Coming." Two other productions, "Computer Theatre" and "Beyond Bauhaus Theatre," a tribute to the late Walter Gropius who greatly admired ZONE's work, have been highly acclaimed.

If ZONE did not appear like Venus out of Zeus' head, neither did the Intermedia Institute. Mrs. Thais Lathem has been busy in the new music field now for a number of years. The series, New Image of Sound at Hunter College, was followed by her enormously successful Electric Ear at the Electric Circus.

Now, with grants from the New York State Council on the Arts and the American Foundation on Automation and Employment, Mrs. Lathem has put to gether an adventurous twelve-part series presenting artistic collaborations with space-age technology.

Aided by Mrs. Lucy Mann, the Intermedia administrator, and Gordon Mumma, the technical coordinator, Mrs. Lathem will bring a showcase of artists from all over the nation experimenting with new combinations of old forms in technological contexts.

New and familiar faces will appear on the program. Gordon Mumma will change his technician's clothes for those of a composer in a collaborative electronic musical and social ensemble held on November twentieth. Later, Milton Babbitt, head of the Columbia-Princeton Electronic Music Laboratory, will invade Automation House with his electronic music concert. David Rosenboom, now working out of Ontario's York University, will provide a living computer mix and brainwave musical participation work. Larajen Hiller, the scientist turned-composer from Buffalo's new music center, and Salvatore Martino of "E's G A" fame, join the series with Morton Subotnik, who will premiere "Side-winder," an electronic sound action with in a total score of lights and film. Pula, a New Haven electronic environmental group and the Electric Stereopticon intermedia performance group are also scheduled. Ken Gaburo, a Californian working with a choral ensemble blending vocal sounds and "Gesture music" will join Mrs. Lathem's agenda at Automation House for more Intermedia experimentation.

The Automation House series is only the beginning of bringing to the surface what has been a very, strong musical underground. Intermedia, as a new art form, will create its own uniquely American tradition within five years.

FOR IMMEDIATE RELEASE:

The New York appearance of ELECTRIC STEREOPTICON, an intermedia performance group from the University of Northern Illinois, will be at Automation House, 49 East 68th Street on Monday, December 14th at 8:30 p.m. The instrumental performance group is co-directed by Al O' Connor, a well known avant-garde percussionist, and J.B. Floyd, a concert and jazz pianist. The visual environment is by faculty members of the University.

The program will include:

AMORES.....John Cage

MASKS.....Paul Steg

EK-STASIS II....William Hellerman

On Sunday, December 13th, ELECTRIC STEREOPTICON will present an intermedia demonstration for the Association of College and University Concert Managers, at Automation House at 9:30 p.m.

For information concerning these events, please phone Lucy Mann at 628-1010.

THAIS LATHAM, DIRECTOR  
LUCY MANN, ADMINISTRATOR  
GORDON MUMMA, TECHNICAL DIRECTOR

INTERMEDIA INSTITUTE AT AUTOMATION HOUSE  
49 EAST 68  
NEW YORK, N.Y. 10021  
628-1010

December 13, 14, 1970

ELECTRIC STEREOPTICON

An Intermedia Performance Group  
 from the University of Northern Illinois

Al O'Connor, J.B. Floyd, Co-Directors.

Sound and sight and jazz and bright and blues and black  
 and rock and socket and improvisation and organization  
 and electronics and stroboscopes and composition and  
 juxtaposition and costume and color and amplification  
 and projection and sidemen and slidemen and aleatoric  
 and meteoric and essence and fluorescence and music  
 and light...blended.

"EK-STASIS II.....William Hellerman

"AMORES".....John Cage

- I. Solo for Prepared Piano
- II. Trio (9 tom-toms, pod rattle)
- III. Trio (7 woodblocks, not Chinese)
- IV. Solo for Prepared Piano

"MASKS".....Paul Stag

Selected Intermedia mixes by the Electric Stereopticon  
 will accompany the listed selections.

Visual Environment by Norman Magden, Doug Stewart and  
 Jeff Paul

Nana Holland.....Vocalist

J.B. Floyd.....Piano and Electronics

Al O'Connor.....Vibes, Percussion, Electronics

Tom Angelos.....Bass

David Merrifield.....Drums  
 Doug Floyd

Multitorium: Films will be shown throughout the evening.

Al O'Connor is known among the avant-garde as the best percussionist in the field. He has worked with John Cage, Morton Feldman, Mel Powell, Salvatore Martirano, Ken Gaburo, Lejaren Hiller, Pauline Oliveros, and Morton Subotnick. He can be heard on Polydor Records performing "Computer Music for Percussion Solo and Tape", a work which was the result of the collaboration with Lejaren Hiller. He studied at the University of Illinois and was soloist as well as assistant conductor of that University's Contemporary Chamber Players. He has also appeared as major soloist on the ELECTRIC EAR series at the Electric Circus, New York City. He is a faculty member of the University of Northern Illinois.

J.B. Floyd is a five time recitalist at Town Hall. He has been soloist with the Oakland Symphony, in recital at the University of California at Davis, and in a four concert Floyd Festival at Cedar Crest College, Allentown, Pennsylvania, which highlighted his twin interests...contemporary music and jazz. His recording of the piano works of Larry Austin and Hans Werner Henze is on the Advance Label. He is on the Music Faculty of Northern Illinois.

Norman Magden is Assistant Professor of Art History at Northern Illinois. He has been art critic, Art Director of Jewish Community Centers in Cleveland, Guest Lecturer, and Exhibitor in many galleries. He held an Action Workshop in Multimedia in Peoria, and at Woodstock, and held media summer sessions for high schools in DeKalb, and at Western Arts Conference, Milwaukee. He has won numerous awards; Purchase Award at the Butler Institute of American Art, at the Annual May Show in Cleveland, Jaycee Exhibitor Award in Cleveland, and the Contemporary Craftsman of Ohio.

J. Douglas Stewart is a former French horn player, industrial designer and agency art director, now teaching photography in the art department at Northern Illinois. His photographs have been published in numerous magazines, including the photography annuals, and his work has been included in exhibits at the George Eastman House "Vision and Expression" and "Photography 68", Purdue University's "The Serial Image", and the University of Chicago's "City of Man". Various museums have acquired his work, among them the Museum of Modern Art. He has a one-man show opening in January at Ohio State University and is currently working on a new book.

Intermedia Institute is indebted to Temple Sound for their contribution to our speaker system.



January 22, 1971

FOR IMMEDIATE RELEASE:

INTERMEDIA AT AUTOMATION HOUSE announces the New York debut of one of the leading young composers in America today. Gerald Shapiro, head of the Electronic Music Studio at Brown University, and Composer-in-residence at Tonus, Inc., (manufacturers of the ARP Synthesizer) will present three major works on Friday, February 12, 1971 at 7, 8, 9, and 10 P.M.

The program will include:

Breath-A participant-activated work

From the Yellow Castle-A work in which the audience is guided through a large cylinder of sound.

and featuring

THE SECOND PIECE  
THE ONE ABOUT FINDING YOUR WAY IN THE DARK  
THE PIECE FOR ROS AND HARRIS

A workshop for the press and industry will be held on Thursday, February 11, 1971 at 4:30 p.m. Mr. Shapiro will discuss his role as artist in the development of the multi-purpose instrument, the ARP Electronic Music Synthesizer, and its use in his own compositions.

Gerald Shapiro, has been a professional jazz and danceband musician since he was fourteen, playing rock, dixieland and at Polish weddings. He received his Bachelor of Music degree from Eastman and his Master of Arts from Mills College. He has studied with Milhaud, Stockhausen and Boulanger, and did early work in electronic music at the San Francisco Tape Music Center with Morton Subotnick and Ramon Sender. He was a

INTERMEDIA INSTITUTE AT AUTOMATION HOUSE 49 EAST 68 NEW YORK, N.Y. 10021 628-1010

THIS MATERIAL IS UNCLASSIFIED DATE 03-03-2003 BY 60322 MAJN AWM/STG/STP/GORDON MUMMA, TECHNICAL DIRECTOR

Fullbright scholar, and performed the sound track for Chappaqua with Ravi Shankar. He is composer for the computer theater, Zone, of Boston, and is currently working extensively on audience activated pieces and environments.

### THE SECOND PIECE

#### Score For This Work:

"Close your eyes and leave them closed.

Each participant is a sound source.

Each sound is different.

You are free to move toward or away from any other participant.

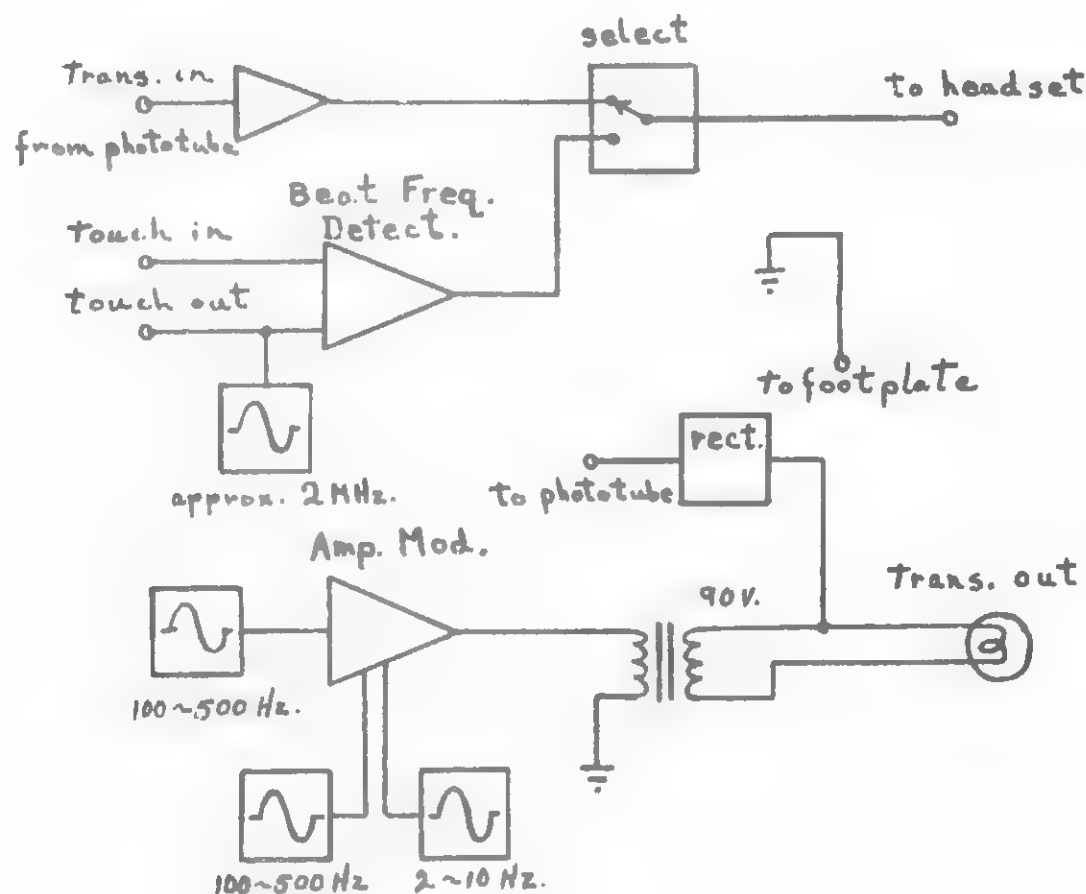
You are free to touch any other participant.

Take your time; listen; find your own way.

Signal when you are finished."

A performance of THE SECOND PIECE begins with a group of participants being given helmets and initiated into the possible actions of the piece by means of the score. They are then escorted into the darkened performance area and left to explore the permutations of listening and interaction inherent in the piece.

#### Performance Module (typical of twenty)



Please phone Lucy Mann at  
628-1010 for reservations.

Friday, February 12, 1971 7 - 10 p.m.

FROM THE YELLOW CASTLE

Gerald Shapiro

- I. Breath - A preparation  
"Begin quietly - we cannot make music together until we  
breathe together."
- II. The Second Piece  
The One About Finding Your Way In The Dark  
The Piece for Ros and Harris  
(composed in collaboration with Bill Patterson)  
Phase one: personal sonar, explorations in a pure audio  
environment.  
Phase two: touch-piece.
- III. From the Yellow Castle  
A direct translation of group movement into sound.

Electronic design: Bill Patterson

Fabrication: Jim Horn  
Scot Bradner  
Beams Production

GERALD SHAPIRO has been a professional jazz and danceband musician since he was fourteen, playing rock, dixieland and at Polish weddings. He received his Bachelor of Music degree from Eastman and his Master of Arts from Mills College. He has studied with Milhaud, Stockhausen and Boulanger, and did early work in electronic music at the San Francisco Tape Music Center with Morton Subotnick and Ramon Sender. He was a Fullbright scholar, and performed the sound track for Chappaqua with Ravi Shankar. He is composer for the computer theater, Zone, of Boston, and is currently working extensively on audience activated pieces and environments.

"I have come to conceive of music as a way of listening - rather than the sound which is listened to, and of a piece of music as a process of interaction resulting in that special kind of listening we call music. In its present form, the event which is called "From the Yellow Castle" consists of three such pieces. All three are participant-activated, there are neither performers nor audience. Neither is there any performance in the usual sense of the word, for what is composed is the listening process itself. In each of these pieces, the participants are involved in an intensely communicative relationship with one another and with the technology of the piece. The medium and the end result of that relationship is sound and the experience for myself and for those who have participated in these pieces is one of total involvement in that sound and in the complex interrelationship that it, and we, are a part of."

# BREATH

Gerald Shapiro

## SCORE

Begin quietly - we cannot make music together until we breathe together.

Listen, after a while you may hear the sound which is missing. That is your sound.

Let the sounds which you make be your gift to the music, neither accompaniment nor solo. Give only those sounds which are necessary, do not be afraid, if you listen carefully you will know what is needed.

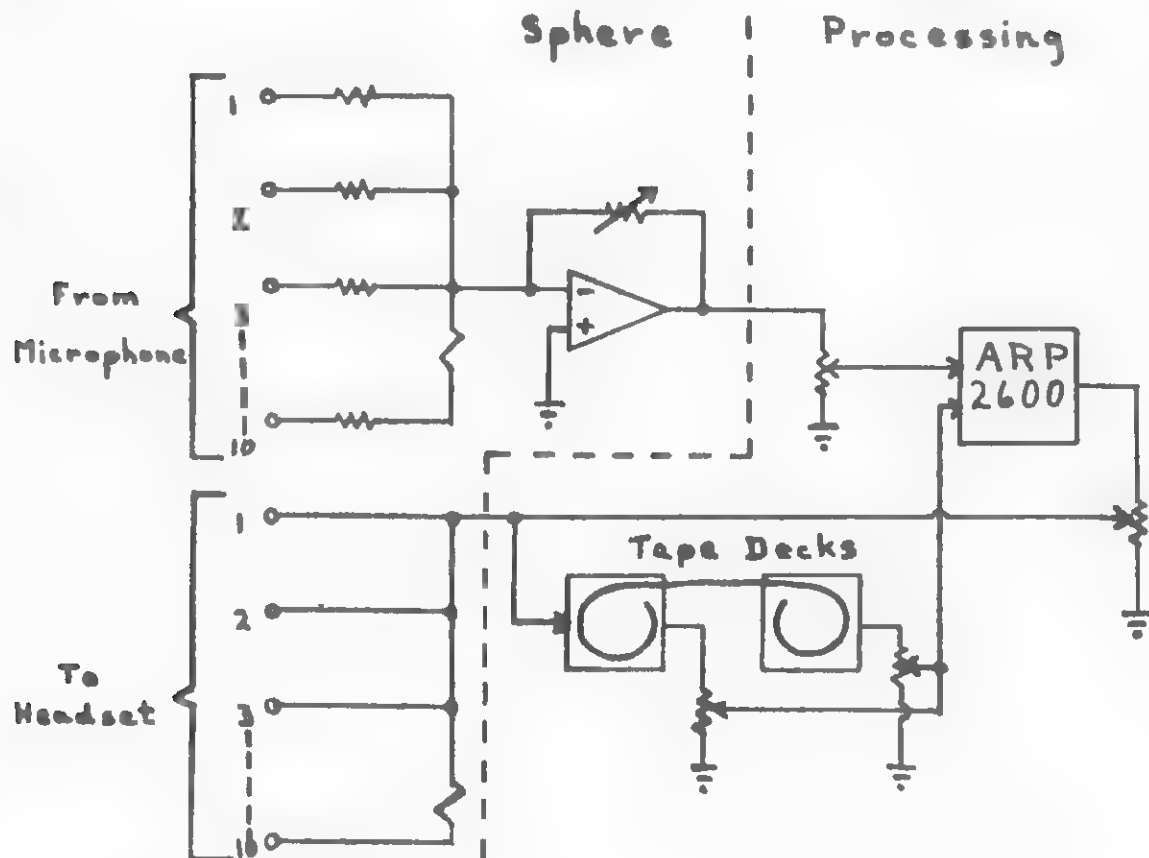
## INFORMATION FOR PERFORMANCE

"Breath" is a participant activated piece intended primarily as a preparation for more structured and demanding pieces such as "The Second Piece" and "From the Yellow Castle."

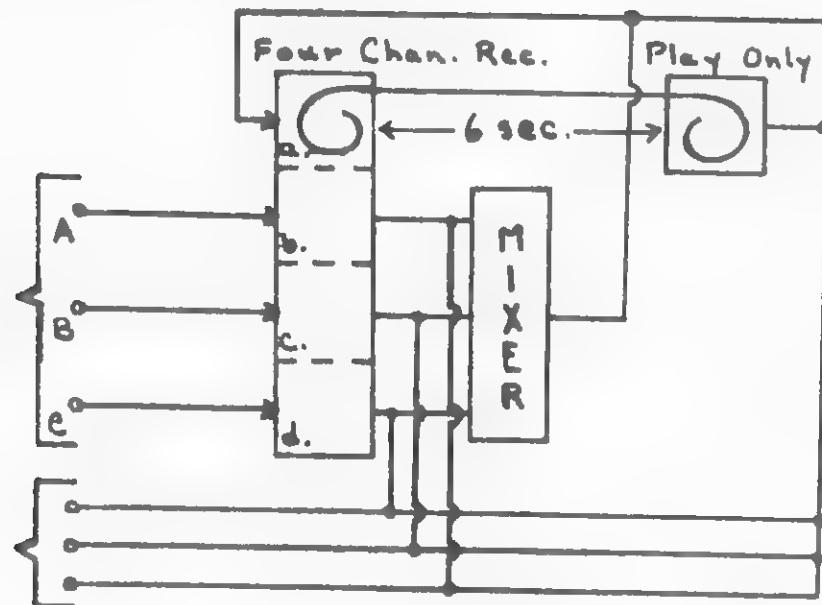
In a darkened room, three frosted white, acrylic spheres approximately ten inches in diameter are suspended from the ceiling. The spheres are lighted internally and provide the only illumination in the room. A number of headsets with boom microphones, and a processing station including an ARP #2600 Synthesizer and a tape delay system are attached to each sphere. The participants activate the piece by producing sound according to the score. These sounds are picked up on the microphones, mixed in the sphere and sent to the processing station for electronic modification and storage. Finally they are returned to the headsets.

Participants may enter the piece at any time when there is a place free at one of the spheres and remain as long as they like. The piece continues until everyone present has had an opportunity to participate.

# PERFORMANCE MODULE (Typical of three)



## TAPE DELAY SYSTEM



THE SECOND PIECE  
THE ONE ABOUT FINDING YOUR WAY IN THE DARK  
THE PIECE FOR ROS AND HARRIS

Gerald Shapiro  
with Bill Patterson

SCORE

Close your eyes and leave them closed.  
Each participant is a sound source.  
Each sound source is different.  
You are free to move toward or away from any other participant.  
You are free to touch any other participant.  
Take your time; listen; find your own way.  
Signal when you are finished.

INFORMATION FOR PERFORMANCE

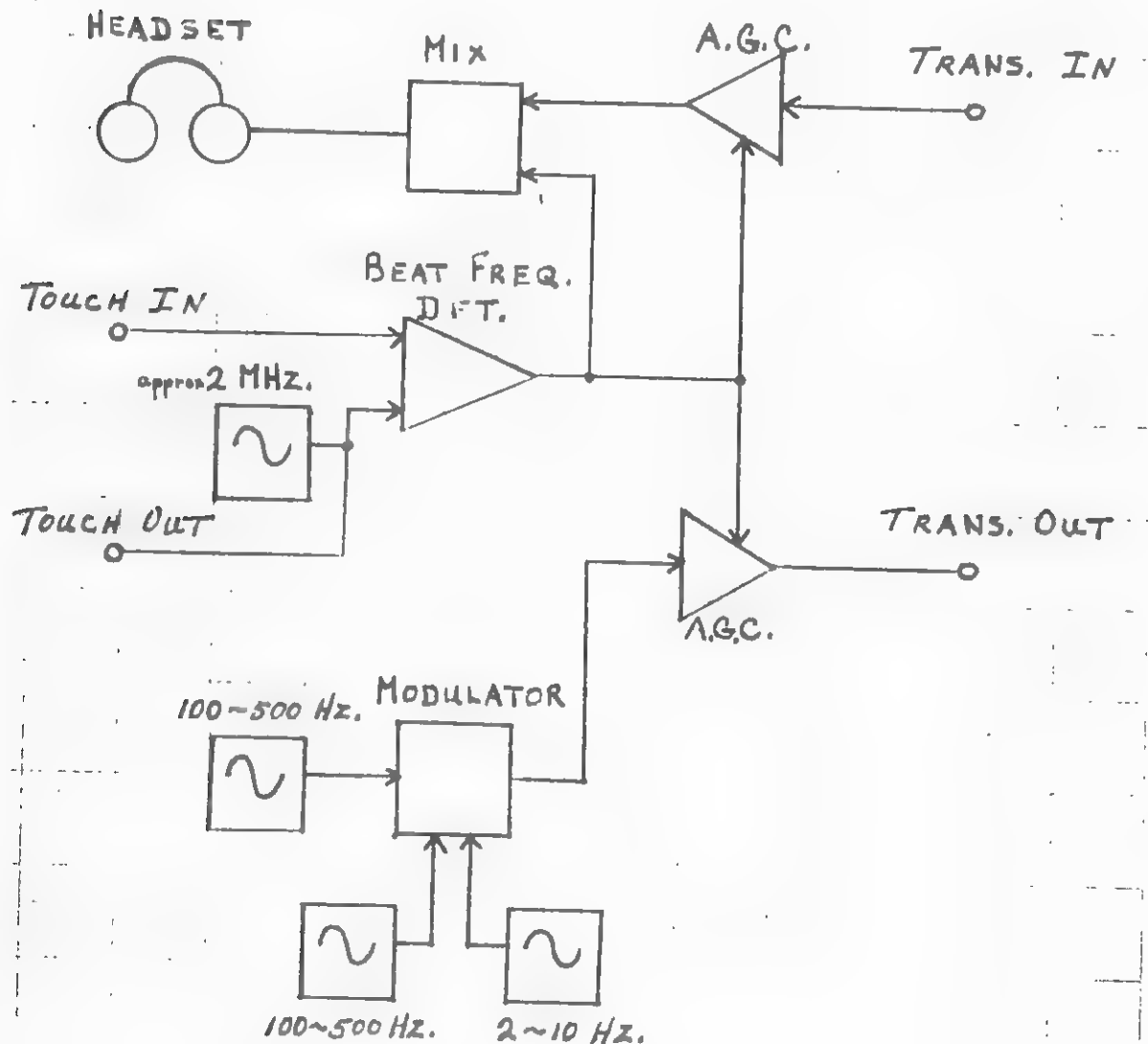
Each participant is equipped with a headset and the necessary electronic apparatus for the piece which together form a kind of helmet. Each helmet contains circuitry which transmits a unique, complex, low frequency audio signal by modulating an invisible, infra-red light beam. Other circuitry detects those signals and routes them to the headset. Because of the highly directional, short range characteristics of this type of transmission, each participant will be able to "look" around the performance space and understand the placement and distance of the other participants. The auditory results of this scanning procedure will be a continuous but constantly shifting soundfield as the participant faces in different directions and the other participants move in and out of range. It is also possible for two participants to move toward one another and stop within touching distance of each other relying solely on auditory cues from their headsets. These two actions, scanning and coming together form the first phase of the piece and lead to the second.

The helmets contain, in addition to the circuitry mentioned before, a high frequency (approx. 2 MHz) oscillator whose output makes a direct electrical connection to the skin of the participant and to one input of a beat frequency detector. Phase two begins when two, or more, participants touch. At that moment, all transmission and detection of light beam carried signal is turned off for the participants involved and they hear instead a sound whose frequency represents the difference between their individual high frequency oscillators. It is possible to slightly alter this sound by touching more or less firmly. A different sound will result for each pair, or group, of participants touching one another due to differences in skin characteristics and different oscillator frequencies. Participants are free to move at will between phase one and phase two as often as they like.

Finally, each participant is equipped with a device for signaling to the Guides operating the piece when he is finished and wishes to leave.

A performance of THE SECOND PIECE begins with a group of participants being given the helmets and initiated into the possible actions of the piece by means of the score. They are then escorted into the darkened performance space and left to explore the permutations of listening and interaction inherent in the piece. When any participant is finished, he signals to the Guides, and is escorted out of the performance space and replaced by a new participant.

Another aspect of THE SECOND PIECE involves continuous monitoring by several video cameras equipped to detect the infra-red light beams used in transmission. This information is fed to T.V. screens in a space near the performance space to allow participants to see what they are about to experience, or have just come from experiencing in auditory and tactile realms.





FROM THE YELLOW CASTLE

Gerald Shapiro  
(1968/revised 1970)

Score

Close your eyes.

Don't initiate any movement;  
Don't hinder any movement.

Don't imagine any sound;  
Don't ignore any sound.

When you are finished, help someone else to begin.

Leave when you like.

INFORMATION FOR PERFORMANCE

The apparatus for "From the Yellow Castle" consists of three cylinders each 4½ feet long by 6 inches in diameter. These cylinders are equipped to detect changes in their angles of inclination and rotation and to use this information to control the complex audio signals which they generate. These signals are transmitted to the performance space by loudspeakers placed in the ends of the cylinders.

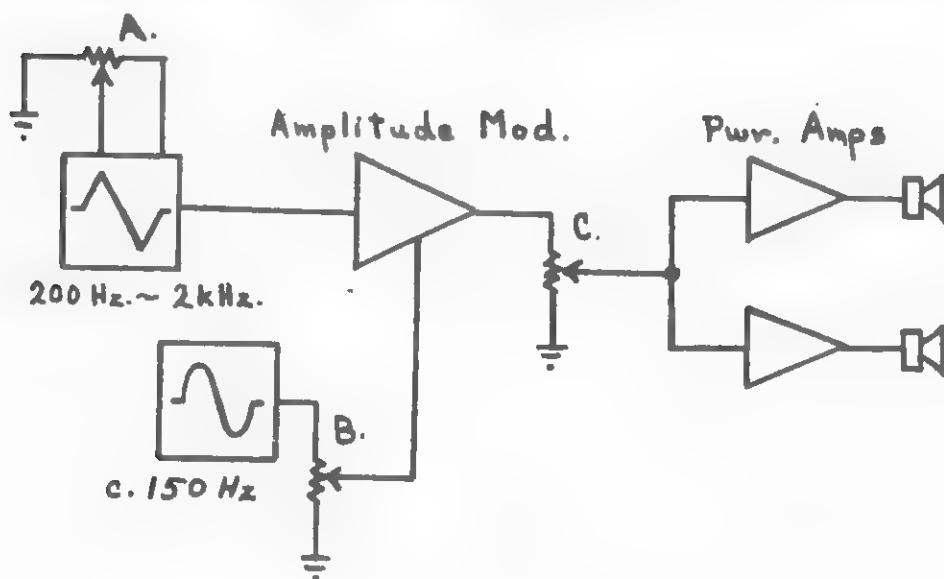
Six or more participants manipulate each tube according to the score. Trained performers may be used to begin the piece or the piece may begin with the initiation of groups of audience members. The initiation procedure involves inviting a member of the audience to participate, if he agrees he is asked to close his eyes and slowly and gently led to one of the cylinders. During this time the score should be repeated quietly to him by the guide. If performers are used, they should simply replace themselves when they are finished doing the piece.

The piece continues, each participant replacing himself with a new participant until everyone present has had an opportunity to do the piece.

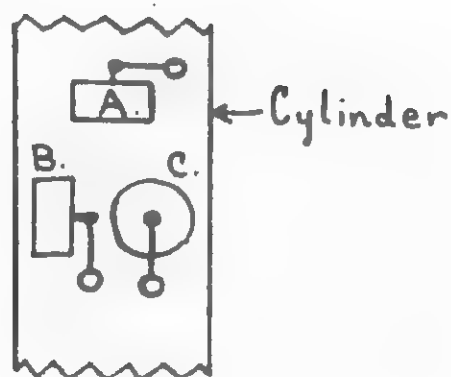
# FROM THE YELLOW CASTLE

(revised 1970)  
G. S.

## PERFORMANCE MODULE (Typical of three)



A. B. and C. are Linear center-tapped servo-potentiometers with weighted shafts.



FOR IMMEDIATE RELEASE:

For Further Information  
and Reservations:

Lucy Mann - 628-1010

Lejaren Hiller, one of the most important American Composers, will present a program of two new intermedia works in his appearance for INTERMEDIA AT AUTOMATION HOUSE on Friday, February 26, 1971 at 7:30 and 9:30 p.m. A workshop for the Press and Industry will be held on Thursday, February 25, at 4:30 p.m.

Widely known for his pioneering work in computer music, Hiller will perform the New York premieres of, PREPARATIONS FOR AN UNKNOWN LANDING (1969), and THREE RITUALS FOR TWO PERCUSSIONISTS AND LIGHTS (1969).

PREPARATIONS FOR AN UNKNOWN LANDING is a 24 minute work which will introduce Buffalo's experimental Company of Man. It is a ballet choreographed by Graham Smith and is divided into "one warning, five classic positions, one movement and the next." Inspired by the violent death of Genette Neveau, the brilliant French violinist who died in an airplane crash in 1941, the ballet alternates its dancers in "roles of virtuoso, accompanist, instruments, passenger, pilot, airliner, fog, mountain peak (and) that which descends (and) that which transcends."

THREE RITUALS FOR TWO PERCUSSIONISTS AND LIGHTS is a U.S. premiere, a "precisely defined composite ritual" lasting 27 minutes.

Born in 1924, Hiller has composed some 46 scores in all media. Musical studies with Roger Sessions and Milton Babbitt were combined with his doctorate in chemistry from Princeton in 1947, in 1968 he left the University of Illinois Experimental Music Studio which he founded and, under his direction, became the liveliest avant-garde center in the world. He is presently Slee Professor of Composition at the State University of New York at Buffalo, where he is the co-director, with Lukas Foss, of the Center for Creative and Performing Arts.

Thursday afternoon, February 25 at 4:30 p.m.  
and  
Friday evening, February 26 at 7:30 p.m. and 9:30 p.m.

LEJAREN HILLER

Auditorium

Seven Electronic Studies for Dancers and Tape (1963 and 1971)

Choreographed by Mary Fulkerson

The Seven Electronic Studies, completed in January, 1963, were composed entirely by classical electronic studio techniques involving tape editing and not with keyboard devices. They are concerned with unusual timbre syntheses, systematic investigations of various scales and interval relationships, delineations of precise intonations, complex rhythmic and dynamic relationships and structural schemes that range from highly organized to totally random.

The Seven Electronic Studies are as follows:

- I. Vocalise
- II. Proportions
- III. Homage to Helmholtz
- IV. Two-Part Invention
- V. Ordered Disorder
- VI. Even-Tempered Scherzo
- VII. Peroration

Although these studies were originally conceived as absolute music, they have also been used on more than one occasion either individually or as the complete set for theatrical purposes. The present production is brand new one especially designed for Automation House.

### The Performers

Mary Fulkerson, who both choreographed this composition and performs in it, is presently an Instructor in Fine Arts at the University of Rochester and a member of the Center for the Creative and Performing Arts in Buffalo. John Rolland is also an instructor at the University of Rochester and is at the same time working for a master's degree in dance at the University of Illinois.

### Technical Direction

Edward Cox is presently Technical Director of the Domus Center in Buffalo. Tonight he is technical supervisor of all three pieces in general as well as of this piece in particular.

## First Floor

### Suite for Two Pianos and Tape (1966)

This music is a edition of approximately one-half of a larger theatrical work call A Triptych for Hieronymus, that is dramatization of the "Garden of Delight" by Hieronymus Bosch. It is not, however, merely a transcription of excerpts because a substantial portion of the material included in the Suite was recomposed with the keyboard in mind.

The Suite is in three movements, each of which is made up of one or more sub-sections, played without pause, as follows:

#### I. Retrospect:

Animal Dance  
Estampie

#### II. Circumspect:

Carnival Time  
Sonata a Cuatro  
Magician's Waltz  
Vox Humana  
Grand Parade

#### III. Prospect:

Intrada

### The Performers

Roger Shields and Neely Bruce have both been graduate students in music at the University of Illinois. Mr. Bruce is currently teaching music theory there while Mr. Shields is now the pianist in the Center of the Creative and Performing Arts in Buffalo. A recording of this Suite by Mr. Bruce and Mr. Shields is available on Helioder 2549006. They have each indicated that they may, if the mood strikes them, also play other keyboard music by tonight's composer.

### The Composer

Lejaren Hiller is presently Snee Professor of Composition at the State University of New York at Buffalo and Co-director with Lukas Foss of the Center of the Creative and Performing Arts in Buffalo which regularly puts on concerts of contemporary chamber music in Buffalo, Carnegie Hall in New York City and in numerous other locations. Prior to this, he was Director of the Experimental Music Studio at the University of Illinois.

To date, he has composed some 46 scores in all media; orchestral music, chamber music, piano music, electronic and computer music and music for theater, films, and television. His most recent scores (in reverse order) are Rage Over the Lost Beethoven (for piano), Violin Sonata No. 3, Three Rituals for Two Percussion and Lights, Computer Music for Percussion and Tape (with G. Allan O'Connor ), HPSCHD for 1 to 7 Harpsichords and 1 to 51 Tapes (with John Cage), Algorithms I, Versions I to IV, for 9 Instruments and Tape, and An Avalanche for Pitchman, Prima Donna, Player Piano, Percussionist and Prerecorded Playback.

Mr. Hiller has an interesting and varied background in scientific research and is the recipient of a substantial Natural Science Foundation grant. He holds the patent for the DuPont dye process for orlon and similar synthetic fabrics. He has a doctorate in Chemistry from Princeton and is the author of several research articles and a textbook in Chemistry. He is also professor of Computer Science at SUNY Buffalo.

## Second Floor

### Three Rituals for Two Percussionist and Lights (1969)

The present performance is the first one in the U.S. All the theatrical elements in this score are fully notated and are integral to the total concept. All gestures and movements are specified, as are all lighting cues. In short, this is not a happening, not an improvisation, not a chance piece, not an opportunity to do your thing; this is a precisely defined composite ritual programmed down to its smallest detail, even the costumes for the performers.

The three rituals have the following structure:

#### I. The First Ritual

Tocsin I  
Intrada  
Tocsin II  
Presentation I  
Ritornello I  
Presentation IIA  
The Exchange  
Presentation IIB  
Ritornello II  
Presentation III  
Tocsin III  
Coda  
Tocsin IV

#### II. The Second Ritual

Preparation  
Timing Cycle I  
Rearrangement I  
Crescendo to a Thunderous Climax  
Lacuna  
Rearrangement II  
Timing Cycle II  
Cadence

#### III. The Third Ritual

Fibonacci Fugue  
Hiatus I  
Uproar  
Hiatus II  
Dual  
Resolution  
Termination of Everything



### The Performers

Jan Williams is presently Assistant Professor of Percussion at the State University of New York at Buffalo. Both he and Howard Zwickler, who is new to Buffalo this year, are members of The Center for the Creative and Performing Arts in Buffalo.

Roberta Friedman and Grahame Weinbren are students who have been presenting intermedia productions for several years. They made all the slides and other visual materials for this performance as well as being performers of the lighting part in the score.

Thursday afternoon, March 4, 1971, at 4:30 p.m.  
and  
Friday evening, March 5, 1971, at 7, 8, 9, and 10 p.m.

SALVATORE MARTIRANO

Introducing the MAR-VIL CONSTRUCTION conceived and built  
by Martirano in collaboration with James Divilbiss.

Multitorium

Continuous showing of "Traces", by Ronald Nameth.

Second Floor

Continuous presentation of the MAR-VIL CONSTRUCTION  
by Mr. Martirano.

Born in Yonkers in 1927, MARTIRANO studied music at Oberlin, Eastman School of Music and the Cherubini Conservatory in Florence, Italy. He studied composition with Bernard Rogers and Luigi Dallapiccola. His list of awards is impressive: Fullbright, Ford Foundation, Guggenheim, Fellow of American Academy in Rome, American Academy of Arts and Letters, Brandeis Creative Arts Award, and Illinois Arts Council Award, to name a few. He has received commissions from the Koussevitsky Foundation, the Fromm Foundation, and the Stanley and Aeolian Quartets. His works have been recorded by Advance, Composers Recordings, Helidor and Polydor.

In contrast to Professor Martirano's pedestrian origins, DR. JAMES DIVILBISS sprang full grown from the brow of an itinerant hoe-handle salesman. Educated almost entirely through the use of learn-while-you-sleep records, he has devoted his professional life to designing computer circuits and straightening paper clips. His ventures into such diverse areas as welded sculpture, hydrology, library automation and study of Hyalophora Cercropia has led his small but dimenishing band of admirers to refer to him as the "dilettante's dilettante." A musical archivist of note, his collection of player piano rolls is unrivaled in east central Illinois. He is 34 but takes a 38 regular suit.

RONALD NAMEETH was born in Michigan in 1942. He studied at the Illinois Institute of Technology. His work has been

exhibited at the Photo-Independent Gallery, Chicago, at the Museum of Modern Art, and at numerous Midwestern Universities. He has received a major award from the American Institute of Graphic Arts. Since 1966 Mr. Nameth has taught at the University of Illinois in Urbana.

R. C. AMENDOLA is a research engineer at the Department of Computer Science at the University of Illinois - he has little to do with computer design. Best noted as a general purpose technical bum, he graduated as an Industrial Designer - a field he has never done anything in. Principal interests include anything visual or optical. Trained as a visual artist, experienced as a mechanic, working as an optical data processing engineer; he has been known to drink beer. Interesting dates in his life include June, 1956; November, 1960; February, 1965; August, 1970; etc.

M. C. HOLLOWAY was born in the Midwest in 1943, where he has since lived and is being educated. He is a retired steel worker and magazine editor, and is currently active in performance poetry and mixed-media events. He seems to have no hobbies and occasionally cannot remember where he lives.

CHARLES MADDEN, born in Los Angeles in 1938, is accompanying Mr. Martirano as a technician - handyman. In his activities as composer and accompanist he works primarily with dance. His work Space Man, which implements acoustical theory as generating and control devices, was recently premiered at the University of Illinois Festival of Contemporary Arts. Mr Madden is currently on the staff at the University of Illinois.

Automation House

Thursday afternoon, March 11, 1971 at 4:30 p.m.  
 Friday Evening, March 12, 1971 at 8:30 p.m.

NMCE, III

LINGUA I: (Poems and other Theaters)

Kenneth Gaburo

Inside (quartet for 1 double bass player), Bertram Turetzky  
The Flight of Sparrow (1 actor, tape), Sherry Dorn  
Dante's Joynt (voices, tape, projections), ensemble  
Mouthpiece (sextet for 1 trumpet player, projections), Jack Logan  
Poesies (for 7 sculptured humans, tape), ensemble

LINGUA II: (Maledetto) - for virtuoso speaker  
 and 6 bodies  
 Alan Johnson, speaker

Kenneth Gaburo

NMCE, III: Bonnie Barnett, Lin Barron, Sherry Dorn,  
 Bruce Rittenbach, Bruce Leibig, Robert MacDougall,  
 Alan Johnson; quest artists Bertram Turetzky (double  
 bass) and Jack Logan (trumpet); Kenneth Gaburo, director

Intermedia Institute has been established through  
 the generous support of the New York State Council  
 on the Arts and The American Foundation on Automa-  
 tion and Employment, Inc.,

KENNETH GABURO studied at the Eastmen School of Music (B.M., M.M., composition), Conservatoria di Santa Cecelia, Rome (composition, conducting), Princeton Seminar in Advanced Musical Studies, and received a D.M.A. in composition from the University of Illinois. From among an extensive array of compositions may be mentioned a series of Antiphonies for live performers and tape, two operas (The Snow Queen, The Widow), and works for chamber ensembles, orchestra, and theater. His compositions Line Studies, Two, Three Dedications to Lorca, Stray Birds, Lemon Drops, Antiphony III, and IV have been recorded. He has held a Fulbright Grant, a UNESCO creative fellowship, Guggenheim fellowship. At present he teaches at UCSD, La Jolla, the starting point of the whole group.

### The New Music Choral Ensemble III

#### Personnel

LIN BARRON, 23, from Oakland, received her B.A. from the UCSD Music Department. She is presently a teaching assistant there and working toward her Master's degree, her research area being improvisation. Her main interest has been performance in instrumental and non-instrumental contemporary works; she is a cellist and is developing her own sound and body movement resources. She is also interested in live electronics, and has recently finished her first piece for this medium, "Sweet Alice." Her interests in Zen, T'ai Chi Ch'uan, science, Women's Lib and Gay Lib are active and ongoing. One of her comments summarizes: "I'm interested in being a 3-D performer."

ALAN JOHNSON, 32, studied at Berkeley, the San Francisco Conservatory of Music (B.M.), UCSD (completing M.A.). He was the staff conductor of the Artists Ensemble at the SF Conservatory in 1966 and 1967, and premiered many new works for small ensembles. He was a free lance musician in San Francisco (symphony, opera, chamber orchestra, commercial). He has become most interested in theatre music and has staged, performed in, and directed many music theatre events at UCSD. He has been a member of NMCE III since 1969. Alan is interested in film both as a medium of musical theater and as a documentary device for music theatre which exists in other media.

BERTRAM TURETZKY, 38, was educated at the Hartt College of Music and at the New York University graduate school, where he studied music as well as musicology. The strongest influences on his work are: Josef Marx (oboist), David Walter (contrabassist), Joseph Cadone (lutenist), Charlie Christian (guitar), Lester Young (saxophone) and Billie Holiday (vocalist). He is the most recorded solo bassist in America, with four solo LP's out. He is one of the only living performers to play programs of music completely written for him -- 150 pieces in 12 years! He has toured throughout the U.S. and Canada and has received the highest critical acclaim. Michael Steinberg, of the Boston Globe, has this to say, "Mr. Turetzky is a bass player whose precise pitch, transparent tone, and wonderfully vital rhythm make him perhaps the best I have heard."

JACK LOGAN, 26, received his B.M. and M.M. from Southern Methodist University in 1966, 1967. He studied trumpet with Alfred Resch, formerly with the NBC Orchestra under Arturo Toscanini, and with Ronald Modell, principle trumpet with the Dallas Symphony Orchestra. Jack has appeared as a soloist with the SMU Orchestra, the UCSD Chamber orchestra, the La Jolla Civic Orchestra, and the Dallas Symphony Orchestra. He served as a graduate teaching fellow at UCSD in 1967 and 1968, and is currently an Assistant Professor of Music at San Diego State College.

ROBERT MAC DOUGALL, 28, originally from the San Diego area, received his B.M. in composition from the Peabody Conservatory in June, 1970, after serving with the U.S. Marine Corps. He is currently working towards his Master's in composition at UCSD and is a teaching assistant in the Music Department. He spends his summers working for the Forest Service in Montana, and having returned to southern California, spends as much time as possible at the beach. He, along with Bonnie, performed in Roger Reynolds' I/O. He is currently interested in theater music; a new work, Fragments of a Journey Through Hell (poem after Artaud), is scored for chamber ensemble, vocalist/dancer, and tape. An early piano work, "Toccata," was played by the winner of the National Federation of Music Club's annual Piano Competition.

BRUCE RITTENBACH, 25, from Portland, Oregon, is a member of NMCE whose main interest and abilities lie in the area of electronics. After receiving his B.S. in science in 1967, he worked for the government for a year as an electrical engineer. Returning to Portland State University in 1968, he performed with the Group for New Music while pursuing postbaccalaureate music studies. At this time he also worked with the Experiments in Art and Technology (EAT) group in Portland-Seattle doing live electronic improvisations, freakouts, etc. At present, Bruce is in the Graduate School of Music at UCSD on a research fellowship, working with faculty and student composers as an electronics advisor.

BRUCE LEIBIG, 24, from Lebanon, Pa., received his B.M. in composition from North Texas State University in August of 1969. His work, "Two Songs for Soprano and Piano" won a prize in the Texas Manuscript Society contest in 1968. While attending NTSU, Bruce worked in the Electronic Music Lab, became interested in computer applications and composed the first computer-written piece in the Southwest. During his three years at NTSU, Bruce played gigs and short-term road work with many bands, including Si Zentner, Les Elgart, Warren Covington, Buddy Morrow, Claude Gordon, and other less notables, holding down the bass trombone chair. Currently, he is a research assistant at UCSD, working on installing the Music V computer-sound-synthesis program.

SHERRY DORN, 26, from Boston, whose hobbies include drawing, flowers, cats, kids, and the ocean, has been a professional actress since she was a child. Her training took place at the Boston Children's Theatre, the Actor's Workshop in New York, and the Neighborhood Playhouse of New York (with Warren Robertson). She has had principal roles in many plays, including "Taste of Honey" and "Twelfth Night," done stock in Boston, Cape Cod, and New York, done work in television (Playhouse 90, U.S. Steel Hour) and film ("The Incident", "What a Lovely Way to Die"). At the present, she and her husband are working as a duo, commissioning new pieces for saxophone-actress-movement. They gave a series of contemporary music concerts in Hartford, Conn. last year at the Image Playhouse, and presented a program in November, 1970, at UCSD. The Dorn's are writing their own pieces, exploring new forms of theater, sound, and movement.

BONNIE BARNETT, 23, from Chicago, received her B.S. in Music Education and her teaching credential in February of 1968 from the University of Illinois, Urbana. In 1966, she became a member of NMCE I. At Urbana, she also worked with the Dance Department, and was involved in performing as a dancer as well as a vocalist. She moved to Del Mar when the Ensemble resituated, and is currently a graduate student and teaching assistant in the Music Department at UCSD, completing her Master's thesis, exploring vocal multi-phonics, which involves close collaboration with the UCSD Linguistics Department. She has performed often at UCSD, most recently in the world premiere of I/O, a music/theater piece by Roger Reynolds. She is also involved in the teaching and development of an experimental music course offered by the Music Department, which includes improvisation and sound/movement as vital elements of the curriculum. Macrame and the ocean are her leisure-time activities.

## - NOTES -

POEMS AND OTHER THEATERS, and MALEDETTO form the first and second segments of a massive 6 hour theater generally entitled LINGUA (1965-1970). The four segments which constitute the theater are:

- (1) Lingua I ( Poems and other Theaters )
- (2) Lingua II ( Maledetto ) A work for virtuoso speaker and 6 bodies.
- (3) Lingua III ( In the Can ) A dialectic mix in 3 rounds, multi-media involving 40 actors and audience.
- (4) Lingua IV ( The flow of ((i)) ) A work for assorted phenomena, based on concerns for thresholds of intelligibility.

Although each of the segments of LINGUA are compositionally distinct they never-the-less obtain congruence on philosophical and aesthetic planes. Additionally, and perhaps more fundamentally, LINGUA speaks out for Language as a major interest of the composer, and for which, in the creative sense, he has coined the term Compositional Linguistics (i.e., body linguistics other than verbal) to structural linguistics, from developments beyond concrete poetry to musical text setting, from semantics ("what does it mean?", as well as "how does it feel?") to sound for its own sake (e.g., phonetic-phonemic content).

Each of the segments is complete in itself and therefore may be performed separately. When Maledetto is given in conjunction with the entire set, it must be performed in complete darkness. When it is given separately, it may be performed in that manner, or as a salon piece, or behind a scrim (only shadow movement), with voices being amplified. In any case, the major emphasis, compositionally, should be on the word and the drama of the word.

Lamps courtesy of George Kovacs Lighting, Inc.,



- NOTES ON NMCE, III -

NMCE III is an ensemble devoted to performance of new music which emphasizes the use of the human voice as a point of departure. It was formed during the summer of 1965 in connection with the University of Illinois workshop in analysis and performance of new music. In that context the ensemble has received support from the University of Illinois School of Music and the research board, and from the Ford and Rockefeller Foundations. By 1968 it included over 40 works in its repertoire, ranging from improvisational to strictly serial pieces, and from microtonal to performer-electronic sound media.

NMCE has gradually evolved to its present state which includes the synchronization of vocal transmission with body movement as well as the development of its own brand of theater. The new works which it has added to its repertoire might be called gesture music, action music, talk music, and/or theater music.

While NMCE III still maintains its primary concern for flexibility in order to meet the complex demands which each new work uniquely makes, it has also become dynamic enough to engage in group creativity (group composition), leading presently to its own set of quasi-anonyma pieces. NMCE III currently resides in La Jolla, California, and most of its members are graduate students at UCSD.

FOR IMMEDIATE RELEASE

For Further Information  
and Reservations:  
Lucy Mann - 628-1010

SUBOTNICK'S "SIDEWINDER" PREMIERES AT AUTOMATION HOUSE

MORTON SUBOTNICK, noted Intermedia composer, will present the New York premieres of "Sidewinder" and two other works when he introduces the "lamination process" at the ninth program of Intermedia Institute of Automation House on Friday, April 2, 1971, at ..... A Workshop for the press and industry will be held on Thursday, April 1, 1971, at 4:30 p.m.

"Sidewinder", performed on the multitorium floor of Automation House, is a 30-minute electronic music composition in which the "lamination" controls will be modulating a laser beam projected around the room. The work will be released shortly on Columbia records.

The second piece, "Circles", is a 10-minute computer film by Doris Chase during which a "live" electronic score is performed on the Buchla synthesizer and spacially controlled by the "lamination" process score.

The third piece, "Windows", is a 15-minute work which includes 2 films (by Don Levy), 12 lights, two dancers, control tape and synthesizer. Here the "lamination" score is realized visually twice on the two films simultaneously as well as in sound. The controls for lights and sound are contained on a separate "lamination" tape and allowed to pass by a second "lamination" score contained on the sound track of the films.

Some of the best electronic music of the past decade,

including Realities 1 and 2 for the Electric Circus, Silver Apples of the Moon, and The Wild Bull, has been written by Subotnick. Born in 1933, Subotnick received an MA in Composition from Mills College, studying with Milhaud and Kirschner. After founding the Mills Performing Group and the San Francisco Tape Music Center, in 1967 Subotnick became Musical Director of the Lincoln Center Repertory Theatre, taught in the Inter-media Arts Program at N.Y.U. and was Director of Electronic Music at the Electric Circus. In 1969 he became Associate Dean of the School of Music and Director of Electronic Music at the California Institute of the Arts at Los Angeles.

P U L S A  
April 12 - 17, 1971  
24 and 25

THE NEW YORK TIMES, THURSDAY, DECEMBER 24, 1970

## Pulsa: Sound, Light and 7 Young Artists



Some of the young men of the Pulsa group with some of their fellow occupants at Harmony Ranch, Oxford, Conn.

By DAVID L. SHIREY

They are seven young artists, all men between 25 and 30, and they all live together with their wives and girl friends in a big country house called Harmony Ranch in Oxford, Conn., north of New Haven. In the summertime they can be seen, usually shirtless, in shorts and barefoot, putting about the house, plowing fields, planting gardens, romping with a gigantic Irish wolfhound, cutting wild flowers or welcoming swarms of other young people into their "commune."

Their clapboard house, with a Federal porch, is always alive, both day and night, with animated conversations and even an occasional drinking brawl. From time to time, the house, to neighbors, must seem like a decadent den for lupanarian delights, when they can glimpse flashing strobe lights coming from inside and hear the shouts of youth along with the weird, eldritch sounds of sitars, electric violins, glongs, flutes and the rataplan of drums.

### Research Team at Yale

From September through June, their hair still long, the seven young men all commute in a plane that overtly bears little resemblance to their country home: Yale University. There, they become a team of research associates at the School of Art and Architecture, teaching seminars, leading discussions on music, art, technology and city planning and, most

importantly, going about what brought them together in the first place, their art. They mysteriously call themselves Pulsa, which sounds like a Buck Rogers name for an interplanetary space ship.

Pulsa as a group prefers to remain anonymous. When one of them talks, he talks for all seven and refers to himself as Pulsa. "Modern society is too complex for one man to understand," they say. "A community of artists working together is the only possible way to meet such complexity."

Whatever its name and policies, Pulsa is, in the words of one of its members, "a group effort to produce an art experience by organizing various sound and light activities in environments." That means that they take changing amplitudes and pitches of sound and translate them into frequencies and brightnesses of light patterns. To do this, they need an environment, usually large, outside or inside, and such complicated instruments and materials as electronic music generators, analog and digital computers and panchromatic tape readers.

One environment they took their gear to was the Public Garden in downtown Boston. In 1968 they placed 55 strobe lights under the water of a four-acre, meandering pond and, around the edge of the pond, above water, placed 55 speakers. Through programmed banks of computers, light and sound

flashed, and streamed in changing patterns across the water at speeds as high as 300 miles an hour. It looked as if the patterns of darting automobile headlights and traffic noises had been locked into a self-repeating impressionist composition.

"TV films, the complex interplay of urban sounds and lights . . . have involved our culture in new areas of perception. The Boston show," says Pulsa, "makes meaningful and pleasurable these experiences which are constantly present in our daily lives."

They added that this "was the first public art work which was conceived on a scale and system comparable to the scale and system of our cities of today." Their feeling is that public art, and that is their primary interest, "must treat all parameters of the urban and technological environment as potential media for artistic expression."

Pulsa is against museums, those "elitist, patrician, artificial places. They bring together objects and cultures that don't belong together and treat them as grand possessions," they say. Nonetheless, they rigged up a show last year at the Museum of Modern Art.

"Our art's an experience and after it's over, it's over. There's nothing to own," they say.

It is true that most of their works have been created in some public environment. On the Yale golf course, and at the Yale architecture department, they shot light and

sound in programmed patterns through their environments, creating worlds unto themselves. "We wanted to create energies which would flow in the environment," says Pulsa.

"Our work is nonassociational, nonreferential," explains Pulsa. "It is a metaphor, but a metaphor of itself, a metaphor of electronic energies. It is a total abstraction, a network of energy living in its own time and space."

As graduate students in the late nineteen-sixties at Yale, the seven men found out they had similar interests and decided to live together.

### Received a Grant

For the last three years they have been surviving on a grant from the Givum Foundation of Chicago. They grow their own organic foods, "not macaronis," and sell some of it and make their own clothes. Living together, they "sometimes are hassled by conflict but we always have resolution in our conflict," they say.

They have a vision that one day all art will be created in university communities like theirs. They define that kind of community as "many people playing one machine instead of one person playing many machines." Whatever their future, they will continue in their own way to unite science and technology and use the public arena throughout the country for their experiments.



A Pulsa installation for a sound and light "art experience" organized on the golf course at Yale University

TECHNICAL DIRECTOR THAIS LATHEN, DIRECTOR LUCY MANN, ADMINISTRATOR GORDON MUMMA, TECHNICAL DIRECTOR

INTERMEDIA INSTITUTE AT AUTOMATION HOUSE 49 EAST 68 NEW YORK, N.Y. 10021 628-1010 INTERMEDIA INSTITUTE

# INTERMEDIA INSTITUTE AT AUTOMATION HOUSE

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## PROGRAM NOTES for

Concert of Electronic Music at the Convention of the Audio Engineering Society, October 8, 1971, 8 P.M. in the Terrace Room of the Hotel New Yorker, NYC.

The INTERMEDIA INSTITUTE presents this program in order to put audio executives in touch with young people who combine their art with ever-changing technology. Their new sounds are as natively American as jazz and rock. The INTERMEDIA INSTITUTE is a non-profit multi-media center that pulls together far-flung talents and serves as their advocate.

DAVID ROSENBOOM - The New York Biofeedback Quartet was established in 1971 by composer-scientist, David Rosenboom, as a result of research efforts carried out at York University in Toronto and now at New York University aimed at investigating some psychophysical aspects of musical perception and performance, now possible with technological advances which allow human beings to monitor their own biophysical functions electronically and attempt to consciously control them and their often associated altered states of consciousness. During tonight's performance, the environment will be under control of monitored brain activity (EEG) from members of the group who have learned, through practice, to control aspects of this activity, such as production of Alpha, a particular type of brain wave. A significant feature of the NYBFQ is its use of group contingent feedback. This technique requires synchronous production of some parameter, such as Alpha, by all group members in order to control the musical textures. In addition to the requirement of producing Alpha waves, each of the performers is given a physical dexterity and group coordination-endurance task to perform which is designed to be extremely difficult or impossible to accomplish unless the members maintain the type of mental state normally associated with production of large amounts of Alpha. This work began with Rosenboom's ECOLOGY OF THE SKIN, a brain wave-biofeedback environment, premiered by the Intermedia Institute in 1970, and was followed by HOMUNCULAR HOMOPHONY, a demonstration-report of research given to the Audio Engineering Society at their 1971 Spring Convention in Los Angeles.

PAULINE OLIVEROS is known for developing "electronic music of the absurd" and theatre pieces using especially unique performers such as Jack Glick, viola d'amore and magician, Al O'Connor avant-garde percussionist and Bill Smith, oboe player. Miss Oliveros was an innovator and later director of the San Francisco Tape Music Center and at Mills College. She is currently associated with the Electronic Music Department of the University of California at San Diego. Several of Miss Oliveros' works are available in the "Music of Our Times" series on Columbia Records. "Double Basses at 20 Paces" is one of Miss Oliveros' classics and is performed and acted by two well-known string bass virtuosos, John Deak and Bert Turetsky.

JAMES SEAWRIGHT has worked in various media, made sculptures with lights and motion and has presented several collaborative works with choreographer, Mimi Garrard. He is technician to Alwin Nikolais and is Technical Supervisor at the Electronic Music Center at the Columbia-Princeton Center. "The Medium is the Medium" was commissioned by WGBH-TV in Boston.

BULENT AREL is a composer from the Columbia-Princeton Center and is currently in the Yale School of Music.

ROGER POWELL is representing TONUS, INC. in tonight's performance of "Electronic Map Syrup." The piece was basically composed for a tape and two live synthesizers, which also allow for live improvisation in addition to this.

SALVATORE MARTIRANO is the recipient of numerous awards and is presently Professor of Music at the University of Illinois. He is one of the most significant composers in America. His works include "O,O,O That Shakesperean Rag", "Underworld", and "Ballad for Pop Singer" as well as the monumental "L's G. A." which will be performed on this program. In close collaboration with Martirano in this work was Ronald Nameth, outstanding young filmmaker formerly from the University of Illinois and Michael Holloway, poet-actor who narrates.

An introduction to the underlying systems unity displayed by current intermedia practices will be held on Friday evenings beginning on October 15th. Discussions will be led by David Rosenboom, David Rothenberg, David Behrman and Frederick Rzewski. Future events will include Terry Riley, Nam June Paik, Tony Martin and Morton Subotnick. Persons interested in participating in these discussions should phone 628-1010.

INTERMEDIA INSTITUTE AT AUTOMATION HOUSE  
49 East 68th Street, New York, New York

*Concert of Electronic Music at the Convention of the Audio Engineering Society,  
October 8, 1971, 8 P. M., in the Terrace Room of the Hotel New Yorker, New York City,  
jointly sponsored by Intermedia Institute\* and ARP Instruments, A Division of Tonus, Inc.*

# THE NEW YORK BIO-FEEDBACK QUARTET

Directed by David Rosenboom  
*Performers to be announced*

# DOUBLE BASSES AT TWENTY PACES

By Pauline Oliveros  
*Performed by John Deak and Bert Turetsky,  
Double Basses*

# MEDIUM IS THE MEDIUM

A film by James Seawright, music by Bulent Arel

# ELECTRONIC MAP SYRUP

By Roger Powell  
*for tape and two ARP Synthesizers,  
played by Roger Powell and David Friend*

# L' S G A

Multi-Projector, Multi-Channel Tape Composition by  
Salvatore Martirano  
*Performed by  
Michael Holloway, Politico with Amplified Gas Mask*

\* Intermedia Institute is sponsored by the  
N Y State Council on the Arts, the American  
Foundation on Automation and Employment,  
and the National Endowment for the Arts.

# A.E.S. CONCERT

Tony- In a way Bill (Graham) never understood Dinah and I either. There was a certain lack of being able to go further with our friendship...or communication

D - (inaudible)

Tony- But he also did some interesting things, for instance -we performed Mike McClure's "Beard"...at the Fillmore. And that was an interesting thing to do.

Ern- Was that the first time?

*It was done first at the Batman Gallery.*  
Tony - It wasn't the first time the play was ever done --I was going to make that flashback-- During this time I had had two one-man shows of paintings at the Batman Gallery which was a very interesting gallery in SF representing Bruce Connor, Joan Brown, Arthur Richard,

Mort- They also did that that young guy, who did the incredible electronics - 17 r old kid who did that environment with little birds - that flew around- and lights - and then he committed suicide-

Tony - George Hermes, Paul Beatty

Mort\*- Bruce Connor did "Love<sup>?</sup> Across the Street" ?

Tony - No, George Hermes did an Assemblage of a book and it had "Love" written on it -then he did a card piece, it was like a deck of cards - it's a very interesting comparison with the N.Y. art world. Because here we have <sup>(B&B)</sup> Indiana and Love, right - as big as World Trade Center - and just as shiny and bright and stylized. And there's George Hermes' beautiful prototype to this whole thing. There were a lot of prototypes in that era.....for things that blossomed out in the late sixties. For a huge amount of people. With that blossoming came the destruction of much of the original input...the original development<sup>1973</sup> beginning to deteriorate. People needed this so bad, in America, that they just

sucked at it, and grabbed at it, and used it and churned it around and put it in Time and Life, made movies of it, and used it and gleaned and pretty soon <sup>and</sup> the creative people <sup>were</sup> on Haight-Ashbury feeling miserable.

Ern- How long did you stay with Bill?

Tony - 1965, 66, -then a prospect came up. The Tape Center had moved to Mills College, we were there and I set up a light studio - a lab for looking into how to use light. Mort and Ramon and Paulene, basically had set up sound studio.

Mort - a difference of history in that. Ramon had taken off, Paulene was on the East Coast - I was getting ready to go to N.Y. and I was stuck the whole summer setting up the studio.

Tony - Ok. The conception of it was still somewhat, // Ramon was still on the scene - in the very beginning of it, but then he took off. That's really when Ramon dropped out.

Mort - Our breakdown at that point ---we were having meetings, like what we're having right now - that would go on until three or four o'clock in the morning----for weeks trying to decide whether or not to accept the money, because literally none of us wanted to go to Mills College. I was already teaching there.

Ern\*- Why did you feel that you would then be under the control of the College?

Mort- We had developed this thing, and it was not an institutional thing. We really had a public impulse, all of us. My public impulse was quite different from Ramon's but his had to do with the Trips Festival and so forth, Tony's had to do with the environmental thing that he was dealing with. Mine was different again. My public impulse was only in the sense that I thought that there should be a place where artists should be able to come together, and that is as far as mine went.

Tony- I was concerned myself with what was my relationship to the visual art world?



Mort Ramon had reached the point where he wanted a commune. He wanted us all to work together in every way. He started one and actually did that. Ramon's vote was for us to take all the equipment and for all of us to go live together. Finally, we made an impressive decision. I am still impressed with the way we made that decision. It turned out to be absolutely the correct decision. We decided together, we never voted or anything. We decided together that this thing was bigger than the rest of us. We could get the money, and it would produce a studio that Tony and Pauline would volunteer to stay on and see the thing through - for one year. To get the thing started and we would have something that we no longer had a use for but might be of use to other people. And to this day, it's still going. It's still called the SF Tape Music Center although its in oakland.

Dinah- And who is the woman who is sort of the Grand Dame - Margaret Lyons - and when there was a concert she would come in and everyone would whisper "She's here".

Tony - Darius Milhaud would come up the stairs in his wheel chair.

Mort - ACTually, Milhaud was really very sweet because he was very interested in ~~maxam~~ having the Tape Center there. He saw --what Tony was calling the Dada thing ---he saw that whole quality that he hadn't seen around the world for a long time and really wanted to have it there.

Tony- In a way, I'm sorry I brought up the word, because it is really entirely different. I was using it in a particular sense about the beginnings of free invention and expansion.

~~Alx~~ A lot of people were impressed with all the results of all the Tape Center stuff - as it emerged later on in some of the concerts we did in N.Y. at N.Y.U. and in the Monday night series of the ELECTRIC EAR.....not to be confusee with any other night at the E'ectric Circus.

Ern - Let's keep it chronological. From Mills College to the Electric Ear. How did you get there?

~~Mort~~\*\*\*~~Tony~~

Tony- I worked for Bill Graham during that year I was at Mills College, and Pauline was there -for half of the directors salary and I was there for half of the directors salary - which wasn't enough to live on - so we were doing other things. I was performing at the Fillmore on Fri and Sat. night for that whole year - and at Winterland. And that's when the thing really mushroomed in terms of audiences and money. Suddenly there was a lot money involved and some beautiful concerts, I must admit.

Dinah - When the concerts drew an exceptionally big crowd, it would be held at Winterland instead of the Fillmore. But I remember something.

Tony went to Bill G. a few months before we planned to leave -1967<sup>7</sup> - and you told him that you were going to N.Y. to N.Y.U. and at the Electric Circus. And I don't think he had truly thought about-----for shortly after we got to N.Y. Bill came to visit us at the Electric Circus and inspected the place practically with a magnifying glass. Said, this place stinks.

Tony - But to back track a little bit, we did some beautiful concerts at Mills College. A nice piece of Pauline's called BIG MOTHER - and the Halloween Concert.

Mort - There were some interesting concerts at Mills even before we got there. We started the year before because we knew we were going there.

Tony - At one point in the Tape Center - we needed technicians - <sup>Bill</sup> Bill devoted himself to our equipment.

Mort - You know what we did with that first \$15,000 - Ramon got a small salary -we paid Bill McGinnis- as our engineer - we paid him to go to school and learn electronics so he could do a better job later for us. Bill McGinnis became our technician also at Mills College. So there were three - Tony Pauline and Bill.

Tony - We would drive over to Oakland every day, or four days a week, and also work at the Fillmore. And we were all pretty conscious of the fact that the Tape Center was going to be very different at Mills, the year after that. That this was sort of the last year of the old regime. And Mort had been invited to go to N.Y.U. the Spring before we went to Mills College so Morton was changing his whole life, and moving to N.Y. and going to teach at a newly formed Intermedia Department.

Thais - Who invited you? Did Boyd come after that?

Mort - Yes Boyd came later. Bob Corregan invited me. The Actor's Workshop people came here first (Ken Dewey) and Herb Blau. I was doing music for Lincoln Center with Herb Blau, and while in N.Y. Corregan called me and offered me the job. He offered Len Lyon ???the job. The two of us were invited to be artists in residence just to give lectures

----

Tony - The School of the Arts at N.Y.U. was trying to set up an experimental group and Corregan saw my thing at a nearby concert in Conn. Pauline and I took a tour. We went to the Univ. of Ill. -did a great big piece,

Thais - Was the Contemporary Music Festival (Hiller) the place?

Tony - Yes, that was an interesting juncture of people, and I remember Mort Feldman snoring in the next room....and then a concert at Wesleyan. That was where Corregan saw my work. Mort had told him to come. So I was invited to join the Trio.

Mort- Actually we were here a whole year before Boyd was invited. He was still part of the RF, he was feeling his way around. At the same time - my first year in N.Y. which was Tony's last year at the Tape Center at Mills -they got started with the Electric Circus and they wanted someone to demonstrate electronics and light and sound. There was no E.C. at the time - they were raising money for it. I went around demonstratin

how light and sound worked, and that was how I got involved. So when it actually got going - they already knew about Tony because Tony had been doing light shows. They had come to visit him at the Fillmore - and I had toured with Jefferson Airplane that winter when I was at Mills. N.Y. in conjunction with the Electric Circus became fairly substantial things for both of us for making a living.

Dinah- The original Electric Circus idea was Michael -----? and it's written on a little piece of paper and kept in a safe at the Circus for something like \$500. He got no royalties. He got a very small amount of cash and later he called collect and asked Tony if he could work on the light show and he did. And he did. And he became Tony's assistant. ~~That was very funny.~~

Tony - We saw the Circus as a money income-producing way to survive in N.Y. City. I thought it would help me get started in N.Y. Dinah and I are both New Yorkers and knew it was going to take some doing to be able to survive here. And the E.C. had a lot working for them. For pure survival instincts, I took the job. Dinah was against it. And I had a lot of feelings against doing it too. I really wanted to get completely immersed in painting and develop my use of electronics and light. Especially since one of the people from w/m Morris Agency was involved. Jerry Brandt. One of the saddest things, was that a lot of the things about that cultural revolution - which was basically musical in S.F. - I saw as being completely misunderstood and bastardized by N.Y. people. And I think that the E.C. was a good example of a complete commercial direction that that took. It destroyed a lot of the beautiful things. There was a lot of nice feelings in those Fillmore..concerts. Mort - There was no way that that could have happened in N.Y.

Tony - There was no way that could have happened in N.Y: It had to transform so when Bill Graham opened up in N.Y. he had a standard old-fashioned

everybody sat down in an auditorium - with a little light show - and worshiped the alter of ROCK. And that's really what it was. It was just rock music with a picture behind it. A Billboard of <sup>light</sup> projections as an alter, and it was highly decorative and I realized that the whole thing was almost completely 180 degrees away from the kind of merging of sound and sight that I had ever had in mind since 1958. The thing had completely turned around.

At the Electric Circus, I saw that some of the comrades could have occurred.

Mort - It almost did at the very beginning. They almost forbade it. The first couple of weeks, we had an almost incredible time. Gerry would start coming up and yelling "They are not dancing" - you know, we had people coming out of the walls with purple bananas. It was really a strange.....

Tony - Anyway it became a completely commercial place.

Dinah - My children's theater was a successful thing.

Tony - The Monday Evening Concerts - some of them - remember the Electronic Chamber - that was a very extensive piece. We went through a lot to <sup>create</sup> ~~create~~ that equipment.

Mort - The Electronic Chamber was one and then the Closer She Gets was another larger version of it. That was interesting because we were already purifying certain kinds of ideas. That piece was all black and white - no color in it - and it was not a sensational thing in that sense it was a very subtle. I still get people suggesting that you could have done this or that. I say I know you could drop a bomb over the world too

Tony - A great sense of the operation overcame everybody, and everybody realized it. Mash everything together.

Mort - We were really trying for a much more conceptual kind of thing -

Tony - I was never interested in environmental art, really.

Ern - Are you describing the things that happened at the Electric Ear?

But Tony also worked the other nights, other than Monday.

Mort - From the beginning Tony and I actually created - it was not a dance hall when we started - what we did was we created an evening that was about five to six hours long. We actually sat down - by the way, I'll never listen to Rock as long as I live - chose the recordings - not on the basis of what people would dance to - in terms of pacing. Color and light, and I wrote special electronic music that would go between that. At a particular moment - someone would fly across the ceiling and we chose when people would do what. We had many circus acts including a fire-eater. An ape-man - and the first week or so we did control things. We directed and literally people would just sit down on the floor and watch what was happening. And Jerry Brandt would start to get nervous. If they weren't dancing they wouldn't come back again. So he would come up right into the booth, right in the middle of something that was being developed and would put a record on and suddenly everyone would get up and dance - then he turned the strobes on - so strobes made people excited.

Dinah - He was the kind of person that would literally shove people out of his way - yank the record off - was just totally crude. Anyone who worked for him was under him - he was the top.

Mort - It took about two weeks for it to completely change.

Tony - It became just a commercial entertainment hall. For essentially what Mort and I had for a year was just a job that said "keep it together". Make it work and train the people that are needed to run this thing. We'll do the art thing later kids. The whole thing became a machine.

Mort - In the middle of all that - my job was luckier than Tony's in that my job was to write this music so I didn't have to be there every night

Tony - I had to go there. Three times a week.

Mort \* You had to go over there to direct the show. We had actually hit the jackpot if we had been interested - and it just passed right by. We actually filled Carnegie Hall two nights in a row and got a standing ovation both nights and a review that could have literally could have put us on the road for the rest of our lives. The Electric Christmans. We did it as a job and we just hated it. We went in and we did the thing. We had to fight with Jerry because he wanted to do this and that and finally we sat down and just wrote the whole thing out from beginning to end, put the thing on - came in, I think we had two hours of preparation. The auditorium was filled both nights - great success and we were just totally disgusted when the whole thing was over.

It was called Electric Christmas with the Pro Musica -Medieval Music and Rock Music. It turned out to be a really nice evening. Parts of that were really nice and lovely.

Thais - That is a whole other story - you know, it all started with Ted Coons idea and his going to John White at the Pro Musica -we were both Board Members. ....I remember the fuss the Board made over this. 'This is not what Prop Musica is for etc!'

Mort - I was writing the Wild Bull then, and Tony lit that guy behind the screen. That was really a beautiful moment.

Thais - That Wild Bull was really an important work. We did the first world premiere at the Electric Ear - just the sound - it was recorded then too. The visual version was given for the International Music Congress in September at the Electric Circus just after the first Electric Ear series had been so sensational.

Tony - Mort and I continued to work together to create compositions usually based on that 17-20 minute that we could do in a performance.

Thais - the International Congress - we literally had to throw the whole concert together within 24 hours. There they all were - delegate

from all over the world. Oliver Daniels had brought Harry Partch to N.Y. and wanted me to show the world what else was new and significant in the U.S.A. We had no funds then, as the Circus was afraid of the Electric Ear's incredible publicity and demands upon its staff. We had to ask people to show for nothing. Oliver said afterwards that our concert was the most impressive evening of the Congress - that it really opened up eyes as to creativity in the U.S.A.

disjuncted talk of tours Colgate, Ithaca.....N.H.....

Ernest - How long was the Electric Circus going before the Electric Ear started?

Mort - the Second year. We had already started experiments. I still believe it was possible to make some kind of an art form of it. It was a great palette. It was a possibility. There was money, there was equipment, and if it could have happened, that was the place where it was going to happen. Because, theoretically we did have control until Jerry came up and started changing records.

Dinah - his message was that everything related to the labido. And everyone who disagreed with him was an asshole.

Mort - Until I quit, and all of a sudden I was a great hero. He was so undependable that you couldn't even depend upon him to hate you.

talk about Jerry Erotic Circus etc.

Mort - There were some attempts at trying to get some things going at the Circus.

about Schechter etc.

Ern - Was that Dionysis?

Mort - That was the beginning of it. etc.

Before the Electric Ear - they gave us the place on Monday nights. The place was fantastic - the equipment

etc.



War Games            etc.

Tony - It's interesting that Schechner had published that score of City Scale in the Tulane Drama Review back in 1963 when he was at Tulane.

about Tulane Drama Review etc.

about Corregan etc.

Tony - Anyway Morton and I started to use the N.Y.U. ~~lab~~ studios to formulate some of our personal ideas and to try to make a workshop for some of the students, and it was difficult to have a clear relationship to the school of the Arts. Out of the first year at N.Y. U. we did two major pieces - The Wild Bull - Play Four had been finished - The Electronic Chamber. All were premiered at the Electric Ear. The W.B. in August, 1968 - Play Four for the Concert Managers in Dec. 1968 and the Electronic Chamber in Aug. 1968. Those pieces came out of the N.Y.U. labs. We did the Electronic Chamber again at the Museum of Modern Art later in ~~1968xxxxxx~~ 69. That was a nice evening. (Judith Blinken and Thais were partners then, and Judy got this one on a series at the Modern).

Tony - Then I did a very interesting concert at the Whitney. in 1969. Mel Powell, Jean Erdman, Milton Babbitt.

Mort - I was actually upset with that concert - because after all of the years I had put in in terms of working toward an esthetic - suddenly the people (who needed the interest took Tony and not me)

Thais - I recall speaking to Don Henahan about that concert pointing out the composers' fear of Mort, and tried to get Tony to do for their music what had been done with Mort. Remember the rave review that Tony got as a result? Otherwise, Henahan would have talked about the music, I thought.

talk about the Whitney ----

Mort - We had worked for years in S.F. and we were treated like shit literally by the N.Y. establishment. All of a sudden, the establishment was suddenly giving concerts and doing the very thing that we had would never have done, which is just additive, decorative.

Tony - I felt different about my piece Composition for Silent Light, and the one with Jean Erdman. They were real pieces. I also started to internalize my ideas and began to wonder about smaller scale - more sculptural applications of a lot of things that came out of performance. And it led to some process-oriented sculptures that turned into a show at Howard Weis Gallery. First one was an interactive piece called Game Room which I never would have called the Game Room because I wanted there to be interaction. Howard Weiss caught on to the Game Room, and Morton had some of the same ideas. I've changed the name of it. It's called Interaction Room (piece 1967). It was a large scale, very expensive rig that worked quite beautifully - to deal with interaction between people who triggered images that would occur on the walls - and sounds - in a square 20 foot space. And that piece went to Milwaukee and the Chicago Museum of Contemporary Art. But more important that these were the smaller pieces, for me. And I started working pretty hard on those with those pieces on the N.Y.U. studios. The Well, the Door. Just recently some of that work has turned into commissions....and sale. Smaller scale process-oriented stuff. I was trying to indicate that at N.Y.U. there was a double thing happening. We were working together and also independently. We started to branch out for exposure in our own right.

Mort - N.Y.U. was a time when we really internalized - partly because we were so ~~let-down~~ <sup>disappointed</sup> by the Circus.

Tony \* The whole culture. The amalgam was burning out then. People were starting to mistrust technology because of the Vietnam War.

If you ask me that is a huge input to the esthetic <sup>around</sup> ~~to~~ this. //  
There has been a huge suspicion about the application of art and technology  
because everybody began to hate technology.

Mort - I also think that the Art and Technology scene as it developed  
in N.Y. - EAT ansoforth -although well-meaning was misdirected. It  
played up the technology rather than the art side. So that the fact that  
something worked, which it didn't most of the time anyway, was more  
important than the concept.

Dinah - It sort of separated them - it was either art or technology.

Mort ~~It was~~ ~~either~~ Art plus Technology.

Tony - For all the attempts that were made to put art and technology  
together - there were only a very few people who could handle it.

Thais - There were a very few good things that came out of it.

Tony - A few good things did come out of it, though. Parts of the  
Expo 70 EAT in Japan - certain aspects of that pavilion

Mort - Not too much has been known about the Japanese thing, because  
it was never finished or seen by a very few people - but the Nine  
Evenings and EAT still stands monumental.